

THE TRIPĀDĪ

BEING AN ABRIDGED ENGLISH RECAST OF

PŪRVATRĀSIDDHAM

(AN ANALYTICAL-SYNTHETICAL INQUIRY INTO THE SYSTEM
OF THE LAST THREE CHAPTERS OF PĀNINI'S ASTADHYĀYI)

BY

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PREFACE

While laying before the public the English version of my *Pūrvatrāsiddham*, I consider it a privilege to express my gratitude to all those Sanskritists who, whether directly, or by means of their favourable criticisms in various periodicals, have furthered this publication

It was, indeed, a great satisfaction to me when, even before the Dutch edition was out of print, Professor C C UHLENBECK, Professor RAGHU VIRA, and other distinguished scholars, advised me to translate my treatise into an international language I regret all the more that, owing to various circumstances, the MS of this work, which had already been finished some years ago, could not until now go to press

This English edition is not a mere translation of the Dutch one, but rather an (abridged) recast While, on the one hand, the treatment of the details has, in general, remained the same, I have, on the other hand, not hesitated to make some alterations in the order and the arrangement of some of the subjects The reader who compares "The *Triṣādi*" with *Pūrvatrāsiddham* will observe that the present recast gave me the opportunity to revise and even amend the argumentation of certain passages which had not been satisfactorily expounded in *Pūrvatrāsiddham*

I should like to acknowledge my indebtedness to my *guru*, Professor B FADDEGON, of the University of Amsterdam, Professor STEN KONOW, of the University of Oslo, and

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H E B

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INTRODUCTION

CHAPTER I. THE AṢṬĀDHYĀYĪ INTRODUCTORY OBSERVATIONS AND GENERAL ANALYSIS

I GENERAL FORM AND CONTENTS OF THE AṢṬĀDHYĀYĪ. STYLE INSTEAD OF SYSTEM?

§ 1

The *concise style* of Pāṇini's sūtras has been highly praised by Western and vernacular scholars¹⁾ The older Indian grammarians, as is well known, rejoiced at the saving of even the length of half a short vowel as greatly as at the birth of a son²⁾ "Wobei", Kaegi says³⁾, "noch daran zu erinnern ist, dass ohne einen Sohn, der die Sterbeceremonien verrichtete, ein Brahmane nicht glaubte, in den Himmel gelangen zu können"

Belvalkar⁴⁾, Winternitz⁵⁾ and others freely call the *sūtra-pāṭha* a *complete grammar* (See, however, Wackernagel, *Altindische Grammatik*, p LXX seq and Liebrich, *Zwei Kapitel*, p XXXIII seqq, and comp § 2.)

Yet Pāṇini is blamed for having sacrificed *system* for the sake of style, or even for having unnecessarily neglected it in his manner of formulating and arranging the sūtras. Belvalkar, who nevertheless judges⁶⁾ that "if Pāṇini seems to depart from this [i. e. a complete programme] in places it is more for convenience of treatment than for anything else", regards⁷⁾ the division of the *samdhī prakaraṇa* (under VI 1 and VIII 2—4) as a lapse in regular logical sequence which he is inclined to ascribe to "Pāṇini's anxiety to secure a maximum of brevity". "[Die] knappe[n], im schwierigen Sutrastil gehaltene[n] Regeln"⁸⁾ are still more rejected by Wackernagel "Die Möglichkeit, Worte zu ersparen", he supposes⁹⁾, "[möchte] [Spätere] dazu führen,

Regeln aus ihrem natürlichen Zusammenhang herauszureissen und anderswohin zu versetzen" and he even speaks¹⁾ of a "für P[āṇini] eigentümliche Art von Unordnung" Winternitz, too, thinks²⁾ "dass dem Pāṇini Kurze die Hauptsache [sei] und Sūtras überall eingeschoben [wurden], wo sie sich der Kurze wegen am besten einfügen Hessen, wenn auch dadurch oft nicht Zusammengehöriges neben einander gestellt [wurde]." Many years before him already Whitney expressed³⁾ his disapproval of "the highly artful and difficult form of about four thousand algebraic formula-like rules in the statement and arrangement of which brevity alone is had in view, at the cost of distinctness and unambiguousness" And Aufrecht spoke⁴⁾ of the "brevitas et obscuritas, quibus Pāṇini ejusque schola studuerunt!"

Statements and criticisms which show that opinions have very little changed since Colebrooke wrote⁵⁾ "The studied brevity of the Pāṇiniya sūtras renders them in the highest degree obscure, even with the knowledge of the key to their interpretation, the student finds them ambiguous In the application of them, when understood, he discovers many seeming contradictions, and with every exertion of practised memory, he must experience the utmost difficulty in combining rules dispersed in apparent confusion through different portions of Pāṇini's eight Lectures The apparent simplicity of the design vanishes in the perplexity of the structure The endless pursuit of exceptions and limitations so disjoins the general precepts that the reader cannot keep in view their intended connexion and mutual relation He wanders in an intricate maze, and the clew of the labyrinth is continually slipping from his hands"

Obs — With reference to the *Siddhanta-Kaumūdi* and similar works in which a different arrangement of Pāṇini's sūtras has been attempted, Colebrooke says⁶⁾ "But the sūtras of Pāṇini, thus detached from their context are wholly unintelligible, without the commentator's exposition, they are indeed, what Sir William Jones has somewhere termed them, "dark as the darkest oracle"" Likewise Böhtlingk⁷⁾ "Spätere Grammatiken,

¹⁾ Ibid., p. 63 Note ²⁾ Winternitz, Geschichte, p. 394 ³⁾ Whitney, Grammar, p. xi ⁴⁾ Liebhaf, Zur Einführung I, p. 1, Note ⁵⁾ Ballantyne, *Laghu-Kaumūdi*, Preface, p. 1 seqq ⁶⁾ Ibid. p. ii ⁷⁾ Böhtlingk, loc. cit., Einleitung p. xvi

die Pāṇini's Sūtra aus der unverrückbaren Ordnung gebracht haben, um alles dem Stoffe nach Zusammengehörige an einander zu reihen, sind ohne ausführliche Commentare, die stets auf etwas weit Vorangegangenes oder Folgendes Rücksicht nehmen müssen, ganz unverstandlich und als Missgriffe zu betrachten".

If then, as late as 1887, in flat contradiction with all that has been quoted above, Böhtlingk judges ¹⁾ "Die Anordnung der Sūtras kann uns hier und da befremden, ist aber streng durchdacht und in bewundernswürdiger Weise durchgeführt", he is answered by Faddegon ²⁾ "In his laudation Böhtlingk is more assertive than argumentative ... The reader who reads Pāṇini for the first time, will be painfully struck by the fact, that the text of the first chapters totally contradicts the assertion of Böhtlingk. Numerous references to later passages are already needed here and are indeed given by Böhtlingk himself in his translation. And even these references are not sufficient in number. Already at the second chapter of the first book the reader is overwhelmed by its grammatical intricacies, and when he has finished the eight books, he only possesses a chaotic impression of details". (See, however, Faddegon's "Studies on Pāṇini's Grammar", which result in a high appreciation)

System is obviously not unanimously ascribed to Pāṇini. The question arises whether Pāṇini really aims at shortness of expression only or, though making unmistakable concessions to this, starts nevertheless from a thorough mental planning of the subject matter

The following chapters are to be looked upon as an attempt to answer this question, as far as the most remarkable part of the *Astādhyāyī*, the *Triṣaḍhī*, is concerned

Rem. — As appears from several data, Pāṇini was not the first Indian grammarian. Highly instructive are in this respect the recent statements of Śūrya Kānta Shastri ³⁾ While, thus, on the one hand, Pāṇini may have borrowed from predecessors, it is on the other hand no less probable that later grammarians should have made their interpolations in his work ⁴⁾ As to this, all we know

¹⁾ Ibid. ²⁾ Faddegon, *Mnemo-technics Act Orient* VII, p. 48 seqq. ³⁾ Śūrya Kānta Shastri, *RT*, *passim*. Comp. also the author's *Purvaśraśiddhi*, Dutch ed., p. 6 seq. ⁴⁾ Cf. Skold, *Papers*, p. 30

is that the *Astādhyāyī* must have had its present form already in the 5th century A D ¹⁾ A *terminus ad quem* cannot be given

Throughout the following pages since they do not concern the historical growth of the work, we shall speak of "Pāṇini".

II NATURE OF THE AṢṬĀDHYĀYĪ THE INDIAN WORD

§ 2

A VYAKARANA ÇABDĀNUÇĀSANA

Pāṇini's *śāstra* is always and emphatically termed a *vyākaraṇa*. In view of the fact that in the *pratiśākhya*s the complete word is the object of investigation, one is inclined to comprehend a *vyākaraṇa* as a word analysis. This is, indeed, implied by its name *vyākriyate 'neneti vyākaranam*²⁾. Goldstucker says³⁾ "*Vyākaraṇa* means 'undoing', i. e. analysis, and Pāṇini's grammar is intended to be a linguistic analysis, it undoes words and undoes sentences which consist of words, it examines the component parts of a word, and therefore teaches us the properties of base and affix and all the linguistic phenomena connected with both, it examines the relation, in sentences, of one word to another, and likewise unfolds all the linguistic phenomena which are inseparable from the meeting of words"

Analysis, therefore, in its usual sense. "Synthetische Darstellung", says Liebich ⁴⁾, "bis zur logischen Einheit, dem Satze", and he believes that "man fragen könnte, ob nicht das panineische System in seinen Grundzügen noch heut mit Vorteil zu verwenden wäre"

The name is of no consequence. As regards the subject-matter the descriptive formulas of the *Astādhyāyī*, save a few rare exceptions, contains the grammar of the word, by which, according to Ries' clear statements⁵⁾, that part of grammar is to be understood which deals with both the internal and the external inflection of the word (taken in the sense as applied to it by Wundt ⁶⁾)

¹⁾ Liebich, Konkordanz, p 49 ²⁾ MBh on I 1, 1, *Vārtā* 12, Vol I, p 11

³⁾ Goldstucker, Pāṇini, p 196 ⁴⁾ Liebich, Zwei Kapitel, p xxxii ⁵⁾ Ries, Was ist Syntax? p 67 ⁶⁾ Wundt, *Volkerpsychologie* II, p 1 seq

The *Asādhya*! is therefore rightly called ¹⁾ a *śabdānuśasana*, a grammar of the (sentence)word as a symbol for a notion. When Patañjali asks himself of what elements the word is composed, he finds ²⁾ that, what has been said, *i.e.* that word = (A) word form (*śabda*), (B) signification (*artha*), and (C) relation (*sambandha*), is right.

This conception of the word notion, in skipping the Greek grammar, has been a pattern to the later European grammar and may, therefore, conveniently be judged from a modern standpoint ³⁾ Thus Pāṇini distinguishes

I. (Form) (A) auditive articulatory elements 1 Form of the root, 2 Form of the affixes (in the broad sense as adopted by Brugmann ⁴⁾), 3 Accentuation, 4 Mutual order of these elements, 5 (c q) Auxiliaries,

II (Function) noumenal elements
(B) Significations,
(C) Relations

How this is to be conceived, may be traced as follows

B WORD ELEMENTS

I Form

Grammatically Pāṇini distinguishes words as verbs and (primary and secondary) nouns (Thus already Kātyāyana ⁵⁾) Indeclinables are regarded as nouns with dropped case-endings. Hence all words are either *verba finita* or *casus* (with possible zero-ending). Both form categories are called (word) *padas* (cf § 7). Hence the question may be put in this way: In what manner are these *padas* to be constructed out of the five elements mentioned above (*I (A) 1—5*)?

1 Roots

By roots Pāṇini understands 1 (original or primary roots) the forms, deprived of *anubandhas*, enumerated by him in the

¹⁾ *MBh*, p. 1 ²⁾ *MBh* I, p. 6, l. 14 seq. *Katham punar idam śhagavatsā Pāṇiner acaryasya lokānam pravṛttam? (Vārttika)* **Siddhe śabdārtha sambandhe*

³⁾ Faddegon, Woord en Zin ⁴⁾ Brugmann, *Vergl. Grammatik* II, I p. 8

⁵⁾ *Vāj. Prat* I, 27

Dhātupāṭha, 2 (derived or secondary roots) formations which arise by the addition a) of the so-called suffixes of the secondary conjugation to primary roots according to III 1 5 seqq, 22 seqq, 23, 2nd pt. seq 28 seqq, b) of certain suffixes to nominal formations (see Obs 5)

2. *Pratyayas*

The name *pratyaya* is applied to the word parts (affixes) treated of in *adhyāyas* III—V

As appears from the manner in which it is indicated (I 1 46 seq), an affix is sometimes conceived as an augment, *i* *e* an increase, hence part of the preceding or following portion of the word. Thus the subjunctive- and optative precativ-signs are regarded as an increment prefixed to the personal endings (III 4 94 seq, 102, seq, 107) similarly the *i* of **iṣṭhi* (VI 1 73) (> *iṣṭhi* VIII 4 40) is regarded as an addition to the *i* of the root *iṣ* (< *iṣ* VII 3 77), the *m* (*muk*) of participial *mana* as an enlargement of *ṣanac* (VII 2 82), the (*vuk*) in *babhūva* is an extension of the root *bhū* (VI 4 88), and so on

Part of the remaining suffixes are added directly to the root. To these belong in the first place the *vikaranas* (III 1, 33—90, see survey below)

A finite verb arises when a personal ending is put after the *vikarana* or, as far as perfects and precatives are concerned (III 4 115 116) immediately after the (original or derived) root (cf however III 1 86)

Obs 1 — In certain cases the *vikarana* may altogether or partly be elided, or changed (cf II 4 72 seqq (cl 2 and 3) VI 4 111 seq, etc, further VI 1 97 and the like)

Besides of finite verbs the root may, by the suffixing of an *a* *tin* or by the substitution of the latter for a *tin* suffix, become the starting point of a nominal formation. The suffix employed here, in so far as it is marked by the *anubandha* *ç* possibly preceded by a *vikarana* (for instance in *bhodant-* (III 2 124) with *a* < *a* (*çap*) + *a* (*çatr*) (VI 1, 97)), is called *krt* (III 1 93)

Obs 2 — A *krt*-suffix usually indicates the agent (III 4 67). Now there are such nominal formations as *açva* and the like, which on account of their form should be considered as *krt*s without being recognizable as distinct

derivations from a root. Before Pāṇini they were, under the influence of the school of Cākatāyana, forcedly explained as derivations from roots and the suffixes that contribute to such formations (*u(n)* and so on) were distinguished as *Unādi* (*Unnādi*¹⁾) suffixes. Without ascribing a special character to them, Pāṇini confines himself to verifying the existence of such affixes and noun-stems (III 3 1—3, 4 75). By the side of them there exist formations in *Unnādi* suffixes which are placed on a level with other suffixes (comp. VII 2 9)

By further suffixing, a *krt*-, sometimes also a *tin* formation, can be extended to a new (secondary) nominal formation. A suffix thus employed is called *taddhita*

Obs. 3 — Hence, there is a contradiction between *Nyāp prātipadikāt* (IV 1 1) and the putting of V 3 56 under this *adhikāra*, Cf also V 4 11 seq

With the *krt* and *taddhita*-formations members of compounds (with the exception of the last one), indeclinables and pronominal stems are, further, taken together and, as *prātipadikas* (crude forms or bases), ranged into one group (see I 2 45 seqq)

Obs 4 — In order to make it possible that in certain cases *dhātus*, too, may do duty as *prātipadikas*, a suffix is sometimes constructed which later on is elided again (*e g* in the case of VI 1 67, cf I 1 62)

To a *prātipadika* may, further, be appended 1 case suffixes (syncopated after indeclinables II 4 82), 2 motion suffixes (IV 1 3 seqq) and 3 new *taddhita* suffixes (like the *samāsānta* suffixes. V 4 68—end of the *pāda*) In the last-mentioned case a new *prātipadika* arises After this, again, the same three kinds of suffixes may be put, 1, and (cf *āryikū* (< *āryakū* < *āryāka* (< *ārya* + *ka* + *ap*), VII 4 13, 3 44, 46)) likewise 3, also after feminine stems And so on

Obs 5 — By the addition of the denominative-suffixes *ya*, *kāmya* and 1 and the suffixes of the secondary conjugation to *prātipadikas* and cases (III 1 8 seqq, 25, first part, 27) — with possible syncopation or epenthesis of certain speech-sounds — the second group of derived roots arises (p 6) (III 1 32)

¹⁾ Goldstücker, Pāṇini, p 54, cf *MBh*, Preface, p 9 seq

Obs 6 — The *nic* formations are divided in three groups by Pāṇini: 1 those of III 1 21 (denominatives), 2 those of 25 (denominatives and — cl 10 — deverbatives) and 3 those of 26 (causatives) Denominatives in *nic* are, further, formed diversely according to the *gana sūtra* "*Pratipadikāḍ dhatv arthe bahulam isthavaś ca*" (DhP X 368) The deverbatives of III 1 25 differ from the causatives of 26 by their meaning

In regard to the suffix, and in the form which it assumes when combined with the latter, the preceding part of the word is called *anga* (stem) (I 4 13)

Obs 7 — Hence it may occur that the notions "root" and "stem" cover one another and even that the stem forms part of the root Thus in the development *V cur + nic* (III 1 25) + *cap* (III 1 68) + *tip* (> *curiati* > *coriati* (VII 3 86) > *coreati* (VII 3 84) > *corayati* (VI 1 78)) *cur* is (original) root, as well as stem (with regard to *nic*), as well as part of the derived root *curi* (*cori*)

On account of their relation to the root, the *pratyayas* may be divided into two groups

1. One group is composed of such suffixes as, according to Pāṇini, relate directly to the primary or secondary root They are *a* those by whose affixing to an *anga* (primary root, *prati padika*, case) secondary roots originate (III 1 5—31), *b*. the *vikaranas* (III 1 33—90), which, as appears from the locative in the *sūtras* in question, are placed before the suffixes sub *c* and *d*, hence, *facto*, directly after the root, *c* and *d* the *tin* and *krt* suffixes, both of which suffixes (III 1 96—end of the *adhyaya*) are put after the root in the sense of III 1 91

All these suffixes may conveniently be called root suffixes, in the face of

2 the other group which comprises all those suffixes which are separated from the root by a "root" suffix, since they are attached to a *prati padika* or to a feminine stem the case, motion and *taddhita* suffixes (IV, V)

Idealiter, *i e* in disregarding syncope or epenthesis phenomena (II 4 72, III 2 97, VI 3 67 seqq and the like) and apart from the *Unnadi* suffixes (cf Obs 2), we find, therefore, that the following suffixes partake of the formation of words

1. Root-suffixes (if at all — *c* and *d* — separated from the root by a *vikaraṇa* only).
 - a. Suffixes of the secondary conjugation and denominative-suffixes. III 1 5—32
 - b. *Vikaraṇas* (affixed directly to the root; see survey below) 33—90
 - c. *Kṛt*-suffixes (immediately after the root with the exception of cases such as III 2 124 seqq. (*ṣit*-suffixes which are separated from the root by a *vikaraṇa*) 96—
 - 2 104, 106—109
 - 124—end of the *pāda*;
 - 3 (1—3), 10—12, 14, 16—130, 158, 163, 167, 169 seqq., 174;
 - 4 9—68, 70—76.
 - d. *Tiṅ*-suffixes (directly attached to the root in the perf. and prec. only; in the other *la-kāras* preceded by a *vikaraṇa*, which may be syncopated again 4 78—112 (with mode-signs assigned acc. to 92, 94 seq., 102 seq., (107).
2. Remote suffixes.
 - e. Case-suffixes IV 1 2
 - f. Motion-suffixes 4—81
 - g. *Taddhita*-suffixes 77—
 - V 4 —V, end of the *adhyāya*.

Among the root-suffixes (group 1) such as are separated from the root by a *vikaraṇa* (the *tiṅ*-suffixes — except the endings of the perfect and the precative —, and all those suffixes which are marked with the *anubandha* ṣ (III 4 113)) are distinguished from the others as *sārvadhātuka*- and *ārdhadhātuka*-suffixes respectively.

A survey of the *vikaraṇas*, in the order in which they occur in Pāṇini's work, yields the following aspect.

1	<i>lri</i> and <i>lrm</i> and <i>lut</i> <i>sya</i> and <i>tas</i>	III 1 33
2	<i>let</i> <i>s</i> (<i>sip</i>)	34
3	<i>lit</i> <i>am</i>	35—42
4	<i>lun</i> <i>cli</i> =a <i>s(sic)</i>	44
	b <i>sa(ksa)</i>	45—47
	c <i>a(ean</i> and <i>an)</i>	48—59
	d <i>i(cin)</i> (before medial <i>ta</i> which is syncopated VI 4 104)	60—66 (cf 8)
5	before a <i>sarvadhatuka</i> suffix denoting the <i>bhava</i> or the <i>karman</i> (<i>ie</i> in impersonal and passive verbs cf also 4 d) <i>ja(yak)</i>	67
6	before a <i>sarvadhatuka</i> suffix denoting the agent (Verbs a <i>a(çap)</i> regularly except in cases below b-h (cf Obs 8) α 1st and 10th class (cf Obs 6)	68—84
	β 2nd class (cf II 4 72 <i>luk</i>)	68 70—72
	γ 3rd class (cf II 4 75 <i>çlu</i>)	75 seq 68
	b <i>ya(çjan</i> 4th class)	68
	c <i>nu(cnu</i> 5th class)	69—72
	d <i>d(ça</i> 6th class)	73—76 82
	e <i>na(çnam</i> 7th class)	77
	f <i>u(8th</i> class)	78
	g <i>na(çna</i> <i>ana</i> (<i>çanac</i>) <i>aça</i> (<i>çayac</i>) 9th class), cf c	79 80 81—84)
7	<i>açir</i> <i>lin</i> <i>a(an)</i>	86
8	in reflexive verbs <i>i(cin)</i> <i>ja(yak)</i> <i>ja(çjan)</i>	87—89 90

Obs 8 — In the Veda there is an interchange of *vikaranas* according to III 1 85

3 Accent

As a rule only one of the syllables of a word bears the accent (VI 1 158) It usually falls as an *udatta* either on the first syllable of the suffix (III 1 3) or on the last syllable of the root (VI 1 162) in compounds it falls as a rule on the last syllable (VI 1 223)

Obs 9 The accent is dealt with that of the autonome word in VI 1 158—2, end, in three places of the *Trispadi* and *passim*, that of the word in *syntax* VIII 1 18—end On Vedic intonation especially I 2 34 seqq On Pāṇini's coception of accent see 59 Obs 6

4. Place

The *pratyaya* always follows the *anga* (III 1 2)

As *composita* (II 1 3 seqq), despite of their being accented according to VI 1 158, are considered by Indian grammarians as junctions of single words (cf however Obs 10) the *Aṣṭadhyayi* must contain, besides a grammar of the word, a grammar of the composition

Obs 10 — Compounds whose members are pure in flections are, indeed, distinguished from those in which the mere stem occurs (whether or not modified secondarily) but the latter are considered as having dropped the ending by *luḥ* (5 7, Obs 2), accordingly such a member is nevertheless treated as an original simplex — *Composita* with a finite verb as a last member are not treated as such by Pāṇini (VIII 4 *asamase*¹⁾)

The mutual arrangement of the members of the *compositum* is dealt with in II 2 30 seqq

5. Auxiliaries

Auxiliaries in the usual sense of the word are not mentioned in Pāṇini's system In a wider sense loose words, as a means of expressing either temporal- or mood relations or both and several *upapadas* (Bohtlingk, Pāṇini p 212¹⁾) might be comprehended as such Such words are the *anuprayogas kr* (*bhū, as*), when put after the perfect formations in *am* (III 1 35 seqq) the particle *sma* (III 2 118 seq, 122, 3 165, 176), *ma* in *mā bhūti*, etc

II Function

To all the above forms noumenal functions correspond They are mentioned in each particular case and bear either on the semasiological notion of the word or on relations

¹⁾ For a detailed study of the notion *upapada* see Faddegon, *Studies on P* 1 Cr., § 34

The former (the notions) are traced in the *Dhātupāṭha*, the latter (the relations) are mentioned partly along with the forms — thus most of the suffix relations —, partly in separate places. In the latter case the functions are summed up successively (thus among the grammatical categories *e.g.* the *personae verbi* and the case-relations) or, for hardly ever apparent reasons, in several scattered places (thus the — not yet separated' — *modus* and *tempus* (*la-kara*-) and some other relations Cf p 18

Obs 11. — According to I 2 56, one of the five sūtras which Goldstucker called ¹⁾ the key stone of Pāṇini's work, Pāṇini would have abstained from stating certain functions. Although this sūtra might be an interpolation as well ²⁾, Liebhich on the ground of the *MBh* I 3 1, *Varttika* 2, states ³⁾ that the *Dhātupāṭha* must, indeed, originally have contained the *dhātus* themselves only and that *uno tenore*. If such be the case, it must be assumed that Pāṇini presupposes those functions to be known to the reader

A special question referring to *composita* exclusively, is the mutual relation between the members of *composita* and their relation to the whole. These relations are described in II 1 6—2 29

Obs. 12 — Dionysios Thrax, as is well known, does not mention these relations at all ⁴⁾

III. METHODICAL PLANNING OF THE AṢṬADHYĀYI ANALYSIS SYNTHESIS

§ 3

A. GENERAL PLAN

The functions of the word-elements referred to above (§ 2) are given by Pāṇini at the first opportunity. The forms themselves of these elements, however, and still more, the whole word forms, arise gradually, as Pāṇini causes them to pass through several intermediate stages.

Example. — *Ābharat* consists provisionally of the *dhātu bhñ* (function and provisional form according to *DhP.* I 1 *Bhñ sattayam*), the thematical vowel *a* (function and form according to III 1 2, 68, I 3 9) and the personal

¹⁾ Goldstucker, Pāṇini, p 163, Note ²⁾ Wackernagel, Altind Gramm I, p. LXVII, Note 3 ³⁾ Liebhich, Zur Einf II, § 63 ⁴⁾ Delbrück, Einleitung, p 8

ending *t* (function and form according to I 4 99, III 1 2, 2 111, 4 78, 100) The 3rd p sing pract **bhūat* thus originated, gets the augment *a* according to VI 4 71, with *udatta* according to the same sūtra and VI 1 158 According to VII 3 84 *u* becomes *o* and by VI 1 78 *o* becomes *au* In this way *abharat* evolves, in which form, further, in *samdhī* *a* may become > zero (by VI 1 109) and in *samdhī* and also in pausa, *t* may change to *d* according to VIII 2 39, 4 53 and 2 39, 4 56 respectively

Owing to this circumstance morphology occupies a large place in the word description of the *Astadhyāyī*, and thus the method applied to it by Panini becomes a characteristic feature of the whole work

This method, which might be called a developing one, consists in Panini's provisionally conceiving all words — inflection forms, § 2 — as considerably simplified, viz all of them as *verba finita*, resp cases which have been built up according to a fixed principle Out of these 'regular' forms the real ones are gradually constructed in the same way as to some extent is done in modern grammar too See instance above

The simplifications referred to are mainly the following

I and II Vocalism and Consonantism

Accentuation is for the present neglected, vowel and consonant *samdhī* are set aside acc sing *vrkam* = *vrka* + *am* (suffix *kak*, UnS III 41, Panini III 1 4, IV 1 2, VI 1 107), instr pl *ragbhīh* = *racbhīh* (VI 1 168, VIII 2 30, 66, 3 15) The various vicissitudes caused by the alternation of vowels and consonants is done away with the vowel of the root usually shows the weak grade (but, for instance, *rac* by the side of *ucyate*!), the stem suffix *guna* (*rajan* with suffix *kanin* = *an*, UnS I 157) the final consonant of a root occurs in the form which it assumes in the conjugation before vowels semi vowels and nasals (*rakti* = *vacti*, cf *racmi*)

III Uniforming of costruction

All words consist of fixed elements each in a fixed form A *verbum finitum* is composed of a root, possibly a *vikarana* and a personal ending, a *casus* is built up from a root, at least one suffix (together with the root = *s'ēm*) and a case ending In connexion herewith suffixes are introduced and removed, reduplication and augmentation are discarded (comp 1 s perf

tutōda < *tudm*, 2 s imper *pāca* < *pacasi*, instr. pl *devāśh* < *devabhis*, and so on)

Obs 1 — In thus deriving the real from the "regular" forms, Pāṇini intends by no means to give a historical development! The only object pursued is simplification of description. For this reason *rajā* arises by the loss of *n* (VIII 2 7), *asthan-* by the change of *z* to *an* (VII 1 75) — in the former case, therefore, *n*, in the latter *z* had been generalized —, *-vat* from *-mat* (VIII 2 9 seqq), *-na* from *-ta* (VIII 2 42 seqq), *klpta* from *krpta* (VIII 2 18), and so on.

Though all these simplifications are of a conspicuously methodical nature, yet Pāṇini's intuition and genius sometimes remind of recent modern conceptions, he anticipates, as it were, a historical comprehension of language. Thus *rājabhis* arises from **rājanbhis* (VIII 2 7). Pāṇini, to whom *a* could not represent sonantal *n*, neutralizes the syncope of *n* with regard to the processes concerning thematic declension (VII 1 9 and the like), which were at an end when the "syncope of *n*" came about — The *o* of *kō'sīdat*, *so'sti*, and so forth, results from VI 1 109 and was, therefore, to cause cerebralization of *s* according to VIII 3 55 seqq. Pāṇini loosens the aforesaid cerebralization from the *abhinīhita samdhī* by neutralizing the latter in regard to the former (by VI 1 86) — In *śādhi* *hi* is replaced by *dhi* by VI 4 101, *s* is dropped by VI 4 35. Pāṇini, to whom the chronology of the phenomena could not be of any consequence, neutralizes both processes in regard to one another (by VI 4 22) — By substituting media aspirata for *h* in *VV* like *duh* (VIII 2 32) Pāṇini "regularly" constructs such forms as **dhugh* (by VIII 2 37), *dugdha* (by VIII 2 40, 4 53) and so on. And so on.

As a rule, however, Pāṇini's formulas differ from those constructed by modern philology. *vāl* arises from a theoretical *vāc* (according to VIII 2 30) and this last form from an equally hypothetical **vacus* (according to VI 1 67, 68), etc. See also § 14, group 7.

Word elements as constructed by comparison of different examples, as correspondances to functions, especially roots, are theoretical values and mere abstractions. They are stencilled forms, deprived of *samdhī* influences, provisionally without vowel- and consonant alternation and without accentuation.

As soon as these elements get vitality, however, *i.e.* after getting linked to spoken words, they give up their theoretical technical (*upadeśa*) form and, in passing through several processes, assume a particular form. In more or less fullness of sound or highness of pitch of the sonantal element apophony and modulation present themselves, certain consonants interchange with phonetically related ones, at the junctures neighbouring sounds adjust themselves to each other with possible gain or loss of phonemes. Words repeat themselves (*amredita*) syllables of the front part or parts of them reduplicate. Frequently elements are replaced by others. And so on. We are reminded of a classic chemical experiment and think of the iron sulphide, which acquires properties that were not inherent in the sulphur nor in the metal either. Or of the iron filings, which, strewn about as a shapeless mass obeying magnetic forces, range themselves to fixed figures, according to fixed laws.

In the manner in which he looks upon the processes, however, and in the way in which he presents them to us, Pāṇini differs completely from modern linguistics. Reduplication is conceived by him as being caused by, or at least closely connected with the presence or absence of certain suffixes (cf VI 1 8 seqq.). Apophony is now connected by him with the attendance of certain suffixes (cf VII 2 115 seqq., etc.), now (VII 3 108 and the like) with certain functions or — as in the case of *samprasāraṇa* (VI 1 15, 108) — described as alternation with subsequent syncope. The reduced vowel at the end of a disyllabic base is described as an augment (*ṛ*) to the following suffix. Cerebralization of *s* and *n* at the beginning of a root presents itself as soon as the root gets its function (VI 2 64, 65). And so on.

All these 'substitutes' become, anyhow, new morphemes, values which contribute to the phonically building up of the word. Owing to the combining of the normalized analytic elements that have been settled by the aforesaid analysis, they may be distinguished from them as syntactical ones.

B THE TWO PARTS OF THE ASTADHYAYI

In this sense I—V being the **First Part** (Analysis) apart from the numerous definitions and interpretation rules of the first *pādas*, which initiate in the technique of the work, and were formerly perhaps given by oral instruction only, is mainly devoted

to enumerating the several normalized abstract word elements (with suppletions), along with the functions with which they are associated, while VI—VIII being the Second Part (Synthesis), in building up the word again out of these elements, treats, on the whole, of all such phenomena as attend the coalescing of the elements to words (modifications, such as the change of one or more single speech sounds of the elements or of the elements themselves, their being replaced by other elements, the appearance of new elements, the disappearance of existing ones, the contraction of vowels, the modulation of the voice), *i* *e* determines the resulting acoustic form for combinations of functions as it is gradually issuing out of the melting pot of forms for the component functions, whilst undergoing distinct processes

Obs 2 — The act of normalizing is continued even in the building up again of the words ("Part II") Thus *praes gaceli*, which has been introduced as *gam*, after *ch* has been restored (according to VII 3 77) gets not *c* (lest *k* should arise according to VIII 2 30) but *t* (VI 1 73) in order that *c* be secured by VIII 4 40 — On the other hand, restitutions are met with already in I—V (cf., for instance, III 2 124 (where *śatr* and *śanac* replace *lat* again), II 4 32 seqq and the like)

The task ¹⁾ Pāṇini imposes upon himself, is to give as completely as possible a record of the language ²⁾ he intends to describe, in fixing accurately the sound symbols that correspond to a particular psychological contents. The *Aṣṭādhyāyī*, thus conceived, answers questions like What is the nom ag in, say, genitive-relation, of *Vraj*? How does 3 s. optative in medial diathesis of *Vkr* run? Mathematically speaking. Given the functions *b*, *d*, *f*, required the form *B + D + F*

Obs 3 — The fact that the portions of the *Aṣṭādhyāyī* ascribed ³⁾ to Jayāditya and Vamana respectively, correspond to the two methodical parts distinguished above, seems to prove this distinction correct

Obs 4 — If Pāṇini should indeed have had in mind the methodical plan of his work, as has been suggested

¹⁾ Cf. *MSA*, vol I, p. 1, L. 14 seqq ²⁾ Cf. *Liedrich*, *Pāṇini*, p. 33 seqq and 47 seqq and cf. *Zwei Kapitel*, p. XXIV seqq, *Winternitz*, *Geschichte*, p. 353 Note 1, *Thieme*, *Pāṇini and the Veda*, *Introd* and p. 76 seqq ³⁾ *Belvalkar*, *Systems*, p. 36

above, *çiva*¹⁾ — or ²⁾ *arīṣṭa* (IV 4 143) — cannot have been used *mangalārtham*, for in that case it stands not at the end of the First Part, not even at the end of a *pāda*, but actually amidst a group of similar suffix sūtras.

From the use of these words in these places, even if joined to the faustal character of *Vrddhi* (I 1 1) — for the sake of which, contrary to all logic, not only sūtras 1 and 2 have been interchanged but, moreover, the usual order of words has been departed from in 1 — and possibly ¹⁾ ²⁾ of *udaya* (VIII 4 67), a conclusion as to a pretended methodical planning can on no account be drawn.

IV GENERAL ANALYSIS OF THE TWO PARTS

§ 4

A FIRST PART

Certain sūtras of Part I (Analysis) are, most probably, interpolations, or their place may be due to shifting. Thus I 1 4 seqq. and the like³⁾, perhaps also the whole part II 4 32—end of the *pāda*, which one would hardly expect in this place (cf § 3, Obs 2, end). The Vedic rules on the accent (I 2 34 seqq.), too, look very strange in this place. Polemical sūtras are I 2 53—57.

A large number of sūtras, again, is formed by *saṃjñās* (definitions, among which also sūtras like I 4 24 seqq. are to be reckoned), *adhyākāras*, (other) *paribhāṣās* (interpretation rules) and other technical rules of the same kind (like I 2 1—26).

In tracing the manner in which the word-image as designed in § 2, is analysed in the remaining analysing-sūtras proper, the following will be found⁴⁾:

I Verba finita

I. (Morphologically)

A (Word-form) (Normalized) form of the root *Dhātupaṭha* (suppletion II 4 35 seqq.) Form of the affixes III—V, *present*, & *g* *præsens* suffixes III 1 68—84, *modus* suffixes, figuring as augments, III 4 92 etc (see p 9), *tin* III 4 77 seqq. (suppletion, resp. syncopation of suffixes II 4 72 seqq., 85) Accent III 1 3, 4 Place I 4 80 seqq., III 1 2 Auxiliaries III 1 40 seqq., etc

¹⁾ *SdhK*, VIII 4 67, Vol. III, p 96 seq. ²⁾ Bohtlingk, Panini, VIII, 4, 67

³⁾ Wackernagel, *Altindische Grammatik* I, p LXII, Note. ⁴⁾ For I, A, etc cf p 5

II (Semasiologically)

B (Meaning (contained in the root)) *Dhatupatha*

C (Relations) As a rule together with the forms (but also separately *e g* inodus tempus III 2 110 seqq 34 seqq etc)

II Casus

I (Morphologically)

A (Word form) Form of the root (stem) *Dhatupatha Gana patha* and *Sutrapatha passim* (*e g* 14 84 seqq) (suppletion II 4 32 seqq) Form of the affixes III—V *passim e g* *krt* suffixes III 1 96—end of the *adhy passim* motion suffixes IV 1 4 seqq (suppletion (syncopation incl) II 4 58 seqq 82 seqq) In regard to composita furthermore settling of the words that are combined to composita and of the conditions required II 1 6—2 29 suffix relations III 2 1—101 (*upapada* composita) V 4 68—end (*samasanta* suffixes) Place and accent see I I A In regard to composita mutual order of the members II 2 30—end of the *pada*

II (Semasiologically)

B (Meaning) The roots in the *Dhatupatha*

C (Relations) As a rule together with the forms (but also separately *e g* case relations II 3 in regard to composita *genus* and *numerus* II 4 1—31)

The semasiological and phonical series usually having been given together the treatment of the grammatical categories and the compounds in *adhy* I—II (whereupon follow III—V suffixes) consists practically in treating the facts according to the following scheme

I 2 *Genus* and *numerus nominis* (58—73)

3 *Genus verbi* (12—93)

4 *Numerus nominis* (21—22)

Personae verbi (105—108)

II 1—2 Grammar of composition (II 1 6—2 29 order of the members 2 30—end)

3 Case relations

4 *Numerus* and *genus* of *composita* (1—31) Substitutions (syncopation incl) of roots stems and suffixes (32—end)

Obs 1 — It may be assumed that in agreement with the mental planning of Pāṇini, I 4 originally followed

on I 1, but that this *pada*, in order to cause I 4 1 to govern both I 4 and II 1, has been put at the end of the *adhyaya*. It is also probable that II 1 and 2 in the given order, followed upon II 3, but that 3 likewise on account of I 4 1, has been put further back (after 2)

By restoring the original arrangement, in the first *adhyaya* almost all the definitions and *paribhasas* come together, whereas further on all that bears upon grammatical categories, as well as that which treats of composition, forms a whole. Likewise, as is also the case in Candragomin's *Candra Vrtti* the composition comes to follow upon the grammar of case, with which it is indeed, closely connected

- | | |
|-------------|---|
| I 1 | Definitions and interpretation rules |
| *2 (= 4) | <i>Numerus nominis, personae verbi</i> |
| *3 (= 2) | <i>Genus and numerus nominis</i> |
| *4 (= 3) | <i>Genus verbi</i> |
| II *1 (= 3) | Grammar of case |
| *2 (= 1) | } Grammar of composition, arrangement
of the members |
| *3 (= 2) | |
| 4 | <i>Numerus and genus of composita</i> |

Obs 2 — In consequence of this changed order I *2 1, in governing one *pada*, would have to be repeated in II *2 1 (in the same way as — with regard to VIII 2 1 — the process of VI 1 77 is mentioned again in VIII 2 108). As to the question whether I 4 2 (alias I *2 2) would admit of such an inversion comp § 6 B (p 39 footnote 6)

B SECOND PART

While in Part I the word is analysed, in Part II the processes are given according to which the word is built up again. In accordance with this difference the matter treated of in Part II should be surveyed quite differently.

A technical distinction is seen at a glance. While in (I) VI—VIII 1 the sequence of the *sūtras* does not influence the order of their application, a *sūtra* of VIII 2, 1—end of the *Asta dhyayī* must never be applied in advance (See § 9 A). Thus two main groups result

I (I 1 1) VI 1, 1—VIII 1 Sarvatra siddham,

II VIII 2, 1—VIII 4 Purvatrasiddham

Both groups allow of subdivision

I

The substitutions of this group have partly been arranged according to the nature of the processes, while the place is every time indicated and partly according to their place, while the nature of the substitution plays a subordinate part. Thus the following division results:

A Particular processes in different places

1 Group VI 1—157 (from 72 *samhitayām*, subdivision see below)

2 Accent

a in *simplicia* (VI 1 158—222)

b in *composita* (VI 1 223—2 end)

B Different processes in particular places

1 *Uttara pade* (VI 3, from 114 upwards *samhitayām*)

2 *Angasya* (VI 4—VII 4)

3 *Sarvasya dve* (VIII 1 1—15)

4 *Padasya* (VIII 1 16—end of the *pada*)

Obs 3 — Sūtras like VII 1 9 seq. would not be expected in this place as put under the *adhikara Angasya*. They are however, closely connected with properties of the stem and could, therefore, conveniently be combined with the other sūtras under one head (comp. also *MBh* VI 4 1 *Vartt* 1). Likewise in VI 3 despite of 1, end, not only the end of the first member of *composita* is dealt with but such sūtras as VI 3 97 seq. etc. have, for similar reasons as just mentioned, been inserted in this group. Such more or less connected sūtras are disregarded with reference to the grouping of sūtras here and further on. So also sūtras or groups of sūtras which may be regarded as egressions or even as interpolations.

We have the following scheme of group A 1 (VI 1 1—157)

a Reduplication (1—12)

b Apophony (13—63)

c Decerebralization (64—65)

d Synecopation (apocope) (66—70)

e 1 Epenthesis (71)

(*Adhikara*) (72)

2 Epenthesis (paragoge) (73—76)

f Interchange vowel consonant, and contraction of vowels (77—131)

g. Syncopation (apocope) (132—134)

h. Prothesis (*s* mobile) (135—157)

Obs. 4 — The processes of syncopation and epenthesis have been divided into two parts, with a view to their different position (comp VI 1 72 *Samhitāyam* = "If two speech-sounds follow immediately one another in uninterrupted speech, whether in the same word or in two different ones")

II

The analysis of this group is the subject of the following chapters.

V PRINCIPLES OF PĀNINI'S SYSTEM

§ 5

The method of word-description applied by Pāṇini has been dealt with in § 3. The subject-matter of the two Parts (I Analysis, II. Synthesis) has been defined and a survey of the matter of either Part has partly been given (§ 4). One is inclined to ask whether leading principles underlying a methodical treatment of the matter are already becoming evident.

A GROUPING

Sūtras that in some way belong together, have in the main been fairly combined to thematical groups. Without having in any way been indicated as such, *e g.* by having been put under one and the same head, sūtra-chains like VII 2 1—7, VIII 2 66—75 are at once recognized as distinctly logical groups, the homogeneity of the sūtras consisting in their bearing on the same subject.

Obs. 1 — Whether the division of the *Astādhyāyī* into *adhyāyas* and *pādas* and the combining of the sūtras to *adhikāra*-groups, are also based on a logical principle, is quite a question (*Adhyāyas*). It deserves notice that the two Parts of the *Astādhyāyī* meet on the boundary between two *adhyāyas*. Although this can hardly be a fortuitous coincidence, the logical division is elsewhere nevertheless often broken through by the grouping into *adhjayas*, *e g.* by the spreading of the *anga-prakarana* over one and a

fourth *adhyāya* (VI 4—VII 4) (*Padas*) Again the spreading of the last-named sūtras over at least a whole number of *padas* does not prove anything in favour of another line of conduct in regard to *padas*, comp. e.g. the treatment of the accent in composita beginning with the last sūtra (VI 1 223) of a *pada*¹ (*Adhikāras*). Of greater importance is that together with the First Part, 1 e together with the fifth *adhyāya*, the validity of several *adhikāras* ceases and new *adhikāras* begin. The further analysis, too, shows that at least part of the *adhikāras* — called heading rules by Goldstuecker — naturally contribute to logical grouping. Their primary task, however, consists in avoiding repetitions in a great number of cases (see below).

That in the grouping of the sūtras to *adhyāyas* and *padas* a practical object should be pursued, seems equally improbable considering the rather unequal length of the parts: the second (shortest) *adhyāya* contains 268, the sixth (longest) 736, the shortest *pada* (II 2) 38, the longest (VI 1) 223 sūtras — The numbers eight and four speak for themselves.

Grouping simplifies surveying and facilitates memorizing. It will do so all the more if there exists a fixed arrangement in the groups. Now, in the arrangement of the sūtras in the groups a tendency is observed of putting the positive rule(s) at the head and giving afterwards the optional and negative rules respectively. This has also the advantage of creating the greatest number of possibilities for contraction. In this respect such a group as the one just mentioned (VIII 2 69—75) is highly instructive. It comes about as follows:

- 66 is the principle rule S final in a *pada* > *ru*. Example *devaR*
 67 contains two ritual terms and one mythological term, nominatives with $R < j, h, s$ (cf. III 2 71, 72) quoted with *as* in order to account for the *a*, which otherwise, as VI 4 14 does not apply here, would be left unexplained. Example *avayaR*¹⁾
 68 (exception to VIII 2 7) associates itself with the preceding rules in likewise teaching the substitution of R . Example **ahaRbhik*

¹⁾ On these three words see Wackernagel, *Altindische Grammatik* I, p. 305 and III, pp. 246, 253 and 325.

- 69 is a restriction on and belongs, therefore, to 68 (*ahan* is *pada* according to I 4 14, 1 62) (Sūtras 67—69 form an egression)
- 70 } Vedic rules Optionally *R* or *r* Examples **avaR*, **bhuvaR*,
 71 } both indeclinables according to I 1 37, *padas* according to
 II 4 82, I 1 62, 4 14
- 72 } Exceptions Instead of *R*, *d* is substituted Examples *vid-*
 73 } *vadbhukh*, *anvaçād(bhavan)* (< *-çast*, *V ças*) (But 3rd p s imperf
Ved as (by the side of *astik*))
- 74 is, with reference to the preceding substitution, an alternating restriction (*d* or *R*)
- 75 finally, logically follows 74 (with the same alternating substitute)

Here the first three sūtras (with the last of which 69 as a restriction associates itself) represent the positive sūtras, the two following ones (70, 71) are of an alternative nature, whereas 72 and 73, as exceptions, conclude the series proper. Afterwards the same sequence repeats itself: the negations form the positive starting point of another progression, in which the alternative sūtras (74, 75) follow (after which the exceptions happen to be absent).

In other words the group (66—75), which one is inclined to conceive as a single one (the *ru* group) proves an artful combination of two groups one of which may be characterized as $r > ru$ and the other as $r > d$ group. The junction is afforded by the sūtras 72 and 73, which in the first progression do duty as negations, in the last as a rule.

B JUNCTION COMBINATION BREVITY OF EXPRESSION

The concatenation just mentioned is very frequent in the *Astādhyāyī*. Thus VI 1, 223—2, end (accent of composita) is the connecting link between VI 1 158—222 (accent of simplicia) and VI 3 (*uttara-pade*). With the former group it has in common that it bears on accentuation, with the latter that it treats of composita. In order to bring about a concatenation between the first mentioned and the connecting group, VI 1 223 has, to the neglect of the division into *adhyaṃyas*, been put in VI 1 (so as to give prominence to the *anuvṛtti* of *anto* (*udāttah*) (220) in 223). Sūtra VIII 2 108 shares the substitution of (for) *r* (*u*) with the preceding sūtra, the position with the following one. The *upasargas pra* etc. (I 4 58, 59) are *nīpatas* like *ca* etc. (57), but they are also *gatis*.

and share this name with *ūri* etc (61 seqq.) And so on. Frequently one group is linked to another, if only one or more opening sūtras of the following group have one term in common with one or more end-sūtras of the preceding one, e.g. VIII 3 23—32 to 17—22 (*hali*). In such a case one of the "groups" may consist in one sūtra only. In this way, for instance, VIII 3 13 and 4 57 are attached to the following and preceding group respectively, by way of an artificial association (*prasanga*).

The connecting link may also be formed by one or more sūtras in a group. In this case the inserted group (c q one sūtra) comes to be placed inside another one. In this manner, for instance, the *matup* group (VIII 2 9—15) could be inserted in the *n* synepe-group (VIII 2 7—8, 16, 17) sūtra 16 belonging to the latter (as an exception) as well as to the former (by *chandasi*). In a similar way sūtras VIII 3 78, 79 are to be considered as an egression within the *s* group (VIII 3 55—end of the *pada*).

By grouping and arranging the sūtras in the above indicated manner the surveying and memorizing was facilitated in a twofold way. Not only were sūtras of a more or less similar nature joined logically as much as possible by their being put together, they allowed, moreover, of being formulated so as to admit of frequent contractions. "In the framing of the sūtras", Belvalkar says¹⁾, "Pāṇini always scrupulously omitted all such words as may conveniently be supplied from sense or from preceding sūtras". A stylistic acoustic net-work is brought about as an expression of the logical one (Sometimes patchwork, see below, Obs. 2).

Besides the formulating of the sūtras severally by means of the fewest possible words, this ellipsis by contraction (*anuvṛtti*, *adhikarana* incl., see above Obs. 1), whereby, moreover, one and the same term is valid in the greatest possible number of sūtras, is the principal feature of the external form of the *Astādhyāyī*.

In the group VIII 2 66—75 mentioned above *anuvṛtti* occurs as follows

Pos	Alt	Neg (Pos)	Alt.
66 67 68 (69)	70 71	72 73	74 75
<i>ruh</i>	<i>ubhayathā</i> <i>chandasi</i>		<i>rur tū</i>
			<i>dah</i>

¹⁾ Belvalkar, Systems p. 24

In the first progression *ruh* is valid in the positive sūtras, while *ubhayathā chandasi* and *dah* are to be read in the alternative and negative sūtras respectively, in the second the validity of *dah*, being lengthened by *ruṛ īā* in the alternative rules, extends to the end

Obs 2 — At times it would, indeed, seem as if more attention should have been paid to requirements of mnemotechnics, than to those of right grouping and arranging. Thus e.g. it seems hardly plausible that the above mentioned sūtra VIII 4 57, which could have been put anywhere (provided only after VIII 2 7) should have been placed after 56 only because, like 56, it bears on a facultative operation (in pausa forms). The motive will rather have been that likewise a word could be spared. It should be borne in mind that the emotional meaning of such an artistic style lends mnemotechnical value to it. Similar considerations must have been the motive for totally reversing the usual order of the sūtras in some groups. Thus group VIII 3 28—32 (attaching of mutes to final nasals), in joining 26, 27 (*īa*) of the preceding group, begins with the alternating sūtras and ends with the positive sūtra 32.

On the whole, however, the constant application of such means as *anuvṛtti* and the like, lends a certain logical elegance to Pāṇini's style, owing to the author's artistry. Along with an excessive veneration for word memory, only a great love for his subject could enable the author to create his remarkable, nay fascinating technical language.

C NEUTRALIZATION OF SŪTRAS

Of a specific technical means concerning the application of the sūtras and, finally also amounting to shortening of expression, Pāṇini avails himself in neutralizing certain rules with respect to certain others. As the former have to be conceived as not existing with respect to the latter, part of the forms which, otherwise, would conform or would not conform to the latter, are secured against (become liable to transitions according to) these rules.

Instances — 1 *Rajabhīh* (VIII 2 7) retains short *a* in spite of VII 3 102 (with respect to this sūtra, in virtue of VIII 2 1, regarded as **rajanbhīh*). 2 *Rājā* (VIII 2 7) with long *a* according to VI 4 8 (loss of *ṇ*

is not perceived as far as VI 4 8 is concerned) 3 *Ko'sicat* (VI 1 109) with dental *s* despite of VIII 3 57, 59 (**Ko asicat*, VI 1 86) 4 *Adhi + V 1 + kinā* (> *lyap*, VII 1 37) > *adhitya* with *tuk* (71) because the contraction *i + i > i* is not effective as far as the addition of this augment is concerned (VI 1 86) 5 *Çadhi* (VI 4 101) in spite of VI 4 35 (**Çashu*, VI 4 22) 6 *Kuru*, 2nd *s* imper with *u* in the root syllable in accordance with VI 4 110 and in spite of 4 106 and I 1 63 (*hi* regarded as still existing) 7 *Hi* in 2 *s* imp *jahi* is not dropped according to VI 4 105 (considered as **hanhi*, VI 4 36) Etc

D LOGICAL, MNEMOTECHNICAL AND ASIDDHATVA PRINCIPLE

The principles mentioned above are fundamentally not in contrast with one another. All of them have a mainly mnemotechnical scope, inasmuch as they tend to simplify memorizing, although certain ways of group connexion and *prasanga* are more particularly calculated for this.

On account of their special importance in regard to the *Triṣaḍi* rational grouping and arranging of the sūtras within the groups and neutralizing will be distinguished here as an expression of the logical and neutralization principle respectively, while the arrangement of the groups themselves (group-connexion incl., often finding expression in *anuvṛtti*), together with shortness of expression, and combination, will be particularly understood as mnemotechnics.

THE TRIPĀDĪ

CHAPTER II PARIBHĀṢĀS AND ADHIKĀRAS THEIR RELATION TO THE TRIPĀDĪ

The proper interpretation of a sūtra I—VIII 1 depends, besides on the text of the sūtra itself, on the *adhikāras* and *paribhāṣās* that bear on that sūtra. In view of VIII 2 1, it is open to doubt whether *adhikāras* and *paribhāṣās* may also apply to sūtras of the *Tripāḍī*. Not until this has been examined may the meaning of the said sūtras be judged.

This inquiry is dealt with in chapter II, subsequently chapters III—V treat of the *Tripāḍī* itself.

I PARIBHĀṢĀS

§ 6

A PARIBHĀṢĀS MENTIONED BY PĀNINI HIMSELF

- 1 Their normal application also with reference to the sūtras of the *Tripāḍī*:

The *asiddhatva* of the sūtras following on VIII 2 1 with reference to preceding ones by no means implies that, conversely, the latter also be *asiddha* in regard to the former. *Pūrvatrāṣiddham* merely signifies *pūrvāsmiṇ kartavye param asiddham*. This appears from the actual application of the sūtras and is, indeed, *ipso verbo* confirmed by Pāṇini himself by VI 1 86 on the strength of which sūtra a group in I—VIII 1 (VI 1 86 seqq.) has been neutralized explicitly in regard to the cerebralization according to VIII 3 55 seqq., in precisely the same manner as in regard to the epenthesis of *tuk* by VI 1 71.

In interpreting a sūtra subsequent to VIII 2 1, therefore, one is supposed to be acquainted with the preceding sūtras and to have applied them already.

There is not the slightest reason for supposing that (preceding) *paribhāṣā-sūtras* — to which, as is apparent from his comparing I 1 5 with VII 3 86¹⁾, according to Patañjali *nisedhas*²⁾, too,

¹⁾ *MBh* on I 1 5, *Vārtt* 3 Vol I, p 54, l 17 seqq., cf *PśhI*, p 3, l 3 seqq.
²⁾ *Paribhāṣās* containing a prohibition (*ant vidhi*)

is meant by Pāṇini, he awards what is called *sthanivattva* to the *adeṣa*, herewith intimating that, however distinct the *sthanin* and the *adeṣa* in themselves are, all the grammatical technical qualities that have been ascribed to the *sthanin* in the Analysis (Part I) all its class qualities therefore, are shared by the *adeṣa*, so that the latter *qua qualitate* (*dhatu*, *anga* etc.) it replaces the former, is to be considered as identical with it¹⁾

Examples — 1 When in the *upapada* compound *uccais *kr̥tva* (II 2 22) the suffix of the absolutivum, which has been introduced as (*k̥tva*) (by III 4 59) is replaced by *ya* (*lyap*) by VII 1 37, the substitution is of two kinds, whilst concerning 1 the suffix as a formans of the absolutivum, 2 the *k̥t* character of it. Now, in regard to either the new suffix agrees with the original one (while it is, moreover, (3) *lit* and (4) *pit*). Thus *ya*, too, is comprised *e g* under 1 *kr̥tva* in *e g* I 1 40, 2 the *k̥t* suffixes referred to in *e g* I 1 5, 46, (3) the *lit* suffixes in *e g* VI 1 193 and (4) the *k̥t* suffixes in VI 1 71. Development *uccais *kr̥tva* (III 4 59) > uccais*kr̥tva* (II 2 22) > *k̥rya* (VII 1 37) > *k̥riya* (VI 1 71) > **k̥riya* (VI 1 193, cf III 1 4). 2 The suffixes which are attached to a root (cf III 4 114 seq.) are also added to *V bhū*, which has been substituted for *V as* by II 4 52. 3 One constructs **ahansta* (> *ahata*, I 2 14 VI 4 37 (*k̥t*) VIII 2 27) along with *avadhistā*. 4. The personal ending designed by *ti* in VI 1 68 also comprises the perfect ending *na*, which is not dropped. It is on this account that *hal* had to be added.

Obs 2 — The *MBh* compares the relation between *sthanin* and *adeṣa* wit that between the *guru* and his son²⁾

Obs 3 Inconsistent tendencies are obviated by special sūtras. Imper *hi*, for instance, which as a substitute for *sī* (*sip*) would be *pit*, is deprived explicitly of this quality by III 4 87 (subsequently it conforms to I 1 5, 2 4 and the like). The *anubandha* of augmented forms is to be settled explicitly (cf III 4 92 I 2 18 seqq.)

A restriction of great consequence is conveyed by the addition of *anālvidhau* (= *anekālvidhau*³⁾) as far as the sound is con-

¹⁾ Cf *MBh* I 1 56, I artt 1, Vol I p 133. *Anyah sthanany anya ādeṣaḥ Sthanany adeṣa prthaktvād etismat karanat sthani-karyam ādeṣe na prāpnoti* and *Kāc* on I 1 56. *Sthāny adeṣayoh prthaktvāt sthanany-ācāryam karyam ādeṣe na prāpnoti-tyayam atideṣa ārabhyate, sthan na tulyam vartate iti sthānivat, sthanivat ādeṣa bhavati sthanany ācāryeṣu karyeṣu [sthanany-āl-ācāryāni karyāni varjyayitvā]*. ²⁾ *MBh* on I 1 56 Vol I p 133 l 4. *Sthani karyam ādeṣe tad-ādeṣe guruvad guru-putra iti yathā*. Cf *Vārtt* 1. ³⁾ *Kāc* on I 1 56. *An-āl-vidhau an-ekālvidhau r ity arthah*.

cerned, the *ādeṣa* is not *sthānivat*. With regard to such processes as refer to the sound-value of an element only, *i e* such as are independent of the grammatical-technical properties which are associated with it, the *ādeṣa* and the *sthānini* must not be identified (Of such processes the *ādeṣa* partakes only, if in virtue of its own phonetical form, it is adapted to it).

Examples — 1. The substitute *ja*, which has been substituted for *tvā* (VII 1 37) does not take the augment that, according to VII 2 50 seq., belongs to (corresponding simplicia in) *tvā*. 2. Before *ja*, which has been substituted for *ne(e)* by VII 1 13, the thematical vowel is lengthened by VII 3 102, because it is the substitute that begins with a *jañ* consonant. 3. After the syncope of the suffix *lśa(sa)* (III 1 45) in **aduhsata* (VII 3 73, *luk'*) and the following substitution of *gh* for *h* (VIII 2 32, **adughṭa*), the *i* is regarded as immediately following on the *gh* so as to become *>dh* by VIII 2 40 (*>adughdha*) — Not as a substitute for *Vhan* (II 4 44), but in consequence of its own phonetical form, however, *V iadh* would conform to VII 2 116 (cf III 1 66), hence VII 3 35 (*avadhi* as opposed to *aghāni*). Similarly the ablatives sing. **asmadat* and **yusmadat* would, as the substitute *at* (VII 1 32), like the original ending *as* (IV 1 2), happens to begin with a vowel, conform to VII 2 89, by the addition of *anādeṣa* therefore, they had to be excluded, thus *asmadat*, *yusmadat* do not become *>asmay-at*, *yusmay-at*, but they remain *>asma at*, *yusma-at* (VII 2 90) *>asmat*, *yusmat* (VI 1 97) *>ma at tva at* (VII 2 97) *>mat*, *tvat* (VI 1 97)).

As associations of a grammatical technical nature are totally absent in substitutions in which not whole elements (root, affix, stem) are replaced by other whole elements, but single speech-sounds by other speech-sounds, such substitutes — save I 1 57 — can on no account possess *sthānivat*ta.

Examples — 1. The *au* which has been substituted for *z* of *du* (VII 1 84) is, in regard to the following *su(s)* not treated as a consonant (like the primary *i*), *i e* this *s* is not syncopated by VI 1 68 2. **Pañcānnām* with *ā* (VI 4 7) because *ām* (IV 1 2) has become *>nām* by VII 1 55. 3. According to VI 4 38 zero may be substituted for *m* in *āgamya* (before *lyap*). Afterwards this zero is no longer treated as a phoneme, it represents, on the contrary, a phonical *nihil*, *i e* the short *a* is regarded as immediately standing before *lyap*. Hence the epenthesis of *luk* (VI 1 71).

4 *Vetasvat* (<*vetasamat*, IV 2 87, VI 4 143) with *v* < *m* according to VIII 2 9 on the ground of the first *a* since the zero is oot *sthanat* Likewise *kumudvat* (VI 4 143) according to VIII 2 10

Obs 4 — The rule is apparently not always observed Thus *s* of **agrahīṣit* is syncopated by VIII 2 28 (*Ita itī*) though *i* (before *si*, VII 2 35) has been lengthened by VII 2 37

I 1 57 *Acaḥ parasmin purā vidhau*

By this sūtra, being itself a restriction on the restriction *anavīdhan* (in the principal rule) the *sthanavattva* is extended to certain phonical qualities If the place of the *nimitta* (cause) of a vowel-substitution is after the *sthanin* (the primary vowel) the *adeṣa* besides being *sthanat* according to 56 is also phonetically (*avīdhan*) so with regard to any process bearing on a phoneme whose place is before the replaced vowel

In the case of syncope, therefore, the zero gets phonical value

Examples — 1 The transition *u* (before *i*) > *v* in the (according to IV 1 44) lengthened stem *patvi* also takes place in the instr sing in spite of the substitution *i* (before *a*) > *y* (*patvya*) (cf p 41, Examples) 2 The stem of 3rd p dual *dhinutah* consists of the following elements *√dhin* + *a* + *u* (cf III 1 80) The *u* is *ardhadhatuka* (III 4 114) and by VI 4 48 the *a* (before it) is syncopated, afterwards, however, it effects the absence of *guna* of the stem vowel (VII 3 86) (With secondary change of the *nimitta* *dhinoti* (*o* < *u* by VII 3 84 the ending of the 3rd p s is *pit*, hence I 2 4 and I 5 do not apply)) — But acc pl *yuṣṇah* (VI 1 63) in which word *n* (after zero < *a*, VI 4 134) after *s* becomes > *n* by VIII 4 1

Obs 5 — The *s* in *velasian* (in spite of VIII 2 66 etc) is due to I 4 19

Obs 6 — *Sthanvadbhava* which is alleged to be based on I 1 56 (57) is also ascribed ¹⁾ to the substitute for the second *a* of *√vadha* For this reason, in *avadhāt* and in the cases referred to in VII 3 35 (cf VI 4 48) the *vṛddhi* (according to VII 2 7) would be prevented by the *sthanavattva* of the zero In a bisyllabic root *vadha* the accent of *vadhā* (suffix *ap*, III 3 76) may, indeed, be explained by III 1 4 and VI 1 162 Bohtlingk however, properly

¹⁾ Kūṣ on II 4 42 *A karantaḥ cayam adeṣaḥ, tatra karantaḥ loṣa bhavati Tasya sthanvadbhavaḥ utadhiḥ ite Hal-anta lakṣaṇa vṛddhīr* (*Ata hal-anta lakṣaṇa vṛddhīr* (VII 2 7) *it*) *na bhavati* On VII 3 35 *Vadhadēṣasyad antatvād etā vṛddhīr abhavaḥ*

observes¹⁾ that Pāṇini, as appears from VII 3 35, starts from *radh* (monosyllabic)

Consequently one must assume that *avaadhi*, as it otherwise would conform to VII 2 116 had to be protected from this operation (by 3 35)

Obs 7 — As appears from the examples the phonological *sthānivat* of a zero usually manifests itself merely in that it is regarded as representing "a" phoneme only irrespective of its particular character, but only giving rise to the fiction that the surrounding two sounds are considered as not immediately following upon one another (cf the following obs)

I 1 58/59 (58) *Na* (1) *padanta* (2) *dvirvacana* (3) *vare ya lopa* (4) *svara* (5) (6) *savarṇanuvāra* (7) *dirgha* (8) *jaṣ* (9) *car vidhisu*, (59) *Dvirvacane 'ci*

The first of these two sūtras confines itself to exceptions to 57, 59 adds another case to the *ac* substitutions (with *sthānivatva* of the *ādeṣa*) of 57

Obs 8 — As to the *sthānivatva* according to 59, it may be observed that from the nature of the case the individual character of the vowel counts here

Examples — (58) *Prati-dīvnaḥ* with long *i* (according to VIII 2 77) in consequence of the *a* (*kanin*, *UnS* I 157) (VI 4 134), (59) 3rd p pl perf *pāpuḥ* (development *pā + uḥ* (III 4 82) > *p(a)uḥ* (VI 4 64) > *pāpuḥ* (VI 1 8) > *pāpuḥ* (VII 4 59)) See also § 11 on VIII 2 31

I 1 62/63 (62) *Pratyaya-lope pratyaya laksanam* (63) *Na luma-tāngasya*

As syncope of a *pratyaya* is a particular form of substitution (the substitute being, namely, a phonical nihil) the same value would have to be attached to the zero as to the *ādeṣa* in 56. Whereas, indeed, this holds good for part of the cases (62), in other cases zero substitutes follow separate rules (63)

(62) When a suffix has been *lopa-śabdena* syncopeated, its influence is, nevertheless, perceived, the suffix (according to 56) being regarded as possessing all those grammatical technical qualities of the *sthānīm* whereby certain sūtras are either applicable or not (*Pratyaya nimittam kāryam, asaty api pratyaye, katham tu nāma syād iti sūtram idam ārabhṣate Pratyaya-lope kṛte pratyaya lakṣanam, pratyaya hetukam kāryam bhavati* 2))

¹⁾ Böhtlingk, *Pāṇini*, p. 272^o ²⁾ *Āṅg* on I 1 62

Examples — 1 *Agnī + ci + kvip* (III 2 91), therefore gets *tuk* (VI 1 71) in spite of the apocope of *kvip* (and *su*) (VI 1 67 (68)) 2 In *kr + u + tak* the *u* which has been syncopated by VI 4 108 still produces *guna* of the stem vowel (VII 3 84) (> *kurtaḥ* VI 4 110) 3 *Tatra* (II 4 82) remains *pada* (I 4 14) 4 Nom *s* **gomats* > *goman* (VI 4 14 (*sau*¹) VII 1 70) in spite of the apocope of *s* (VI 1 68 (*lopa*¹))

Obs 9 — In a phonological sense however the blank (again according to 56) is not equivalent to the suffix that has disappeared *i e* it is actually treated as a nihil

Examples — 1 *Agnit* (VI 1 71 + *ṣete* > *cc* (VIII 4 40) as *kvip* has phonologically entirely disappeared (III 2 91 VI 1 67) 2 *sprc + kvin* (III 2 58) + *su* > *sprc* (VI 1 67 68) > *sprk* (VIII 2 62) as both *v* and *s* have ceased to exist as phonemes 3 1st p dual *kurvaḥ* would (by VIII 2 77) still become > **kñrvaḥ* as *v* is regarded as immediately following upon *r* this had therefore to be prohibited by VIII 2 79

(63) When the syncope referred to above has been *lunata* indicated there exists no *pratyaya lakṣana* (in the said sense) with reference to such substitutions in the stem as depend on the suffix. So far therefore the suffix has disappeared without leaving any trace (*Lunata śabdena lipte pratyaye yad angam tasya pratyaya-lakṣanam karyam na bhavati*¹))

Rem — *Luk ślu* and *luṣ* as opposite to *lopa* always indicate the synope of the whole suffix

Examples — 1 From the fact that the suffix *ya* (*yan*) which forms patronymica (IV 1 105) has been *luka* syncopated in the plural (II 4 64) the *nittva* is lost *i e* VII 2 117 is no longer applicable (sing *Gargyaḥ* pl *Gargah* not (by I 1 62) **Gargah*)) 2 No *guna* of *i* in nom pl *katī* (VII 3 109) on account of *luk* in VII 1 22 3 The substitution of *u* for *a* (VI 4 110) in *karu* (< *karuḥ* VI 4 106) had to be secured by VI 4 22 (the substitute for *sip* is *apit* (III 4 87) therefore *nit* (I 2 4)) 4 *Gomat priyaḥ* without *num* (VII 1 70) and without *a* (VI 4 14) because the termination has been *li ka* syncopated by II 4 71

Obs 10 — As *pratyaya lakṣana* (62 63) is not =

¹) *Kāś* on I 1 63

pratyaya-varna : *e.* as the *sthānnattva* only concerns operations that depend on the suffix as such and not on a particular speech sound as such and *au* instead of *o* in *go hita* (< *gare-hita*) requires decidedly a following vowel, *o* might be explained by a supposed *lopa*-substitution as well. The apocope is, however, *lumatā* indicated (II 4 71) and Patañjali and Jayāditya, therefore, wrongly treat this form under 62

[For the sake of brevity Pāṇini might have laid down a rule according to which *sthānnattva* does not exist in regard to substitutions in the *Tripādi*. This is the purport of *Vārti* 3 on I 1 58, which runs "*Pūrvatrāsiddhe ca [na sthānnat]*"¹⁾

Obs 11 — Goldstücker considers it to be a part of Patañjali's comment²⁾ As a *paribhāṣā* it occurs in the *Paribhāṣārtha samgraha-vyākhyā-candrikā* and also (in a corrupt form?) in Śirādeva's *Paribhāṣā-Vṛtti* (No 92). In the *Kācākā* and in the *Siddhānta Kaumudī* it is often referred to (*e g.* on VII 3 73, VIII 4 65 and VIII 4 1 respectively)

Obs 12. — As appears from *Vārti* 10, which contains a restriction for other than *lopa* cases, the *na sthānnat* refers not only to *loṇy-ādeṣas* (*Vārti*. 1) but to any *aj-ādeṣa*.

a) Advantages

Vārti 4 *Prayojanam kṣa-loṇa sa-loṇe* (cf I 1 57, *Vārti* 22) (Pat.) *Kṣa loṇa sa loṇe prayojanam adugdha, adugdhāḥ* *Lug ṛā duha-dīha liha-guham ātmanepade dantje itī lug-grahanam na kartatjam bhavati*. If *Vārti* 3 is adopted, there will be no need of *luk* in VII 3 73, in regard to the substitution of zero by VIII 2 26 *adugdha adugdhāḥ*

Obs 13 — If (in retaining *ta*) *luk* is omitted, *loṇa* (taken from 70) and *kṣaṇa* (from 72) would be valid in 73 and by this sūtra the *a* of *sa* (in **aduhsata*, treated as a sigmatical aorist by Pāṇini), would optionally be syncopeated and afterwards **aduhsta* would rightly become

¹⁾ This *Vārti* is, therefore, as the author has been kindly informed by Professor Sten Konow, an improvement on Pāṇini not a statement (of *hityāyana*) as has been wrongly supposed in the Dutch edition of the author's "*Pūrvatrāsiddham*". The form of the following reasoning has been changed accordingly

²⁾ Goldstücker Pāṇini, p. 113, Note 32

**aduhta* by VIII 2 26. — The process is optional, with a view to sigmatical forms such as **aduhsata* and the like

Obs. 14. — By adding *dantya* Pāṇini also includes *-vahi* in the personal endings beginning with a consonant *adhuksāvahi* beside *aduhvahi* (cf. *Vāj. Prāt.* I 70, 81).

Vārtt. 5. *Dadha ākāra-lopa ādi-caturthatve* (Pat.) *Dadha ākāra-lopa ādi-caturthatve prayojanam dhatse, dhaddhve, dhaddhvam iti. Dadhas tathoc ca iti ca-kāro na kartavyo bhavati* By adopting Vārtt. 3, in VIII 2 38 *ca* might be omitted, with regard to the zero that has been substituted for *ā* of *dadhā* (by VI 4 112)

Obs 15 — If 38 read with *ca*, *sdhvor* (taken from 37) must be read in 38 and *dhatse, dhaddhve* and *dhaddhvam* conform to the latter rule, from which no conclusion can be drawn as to whether the zero that has been substituted for *ā* (by VI 4 112) be *sthānivat* or not, as Pāṇini gives the form *dadh* without *ā* here

As soon as *ca* is omitted, *dhattah dhatthah* still conform to 38 but the examples just mentioned, are already explained by 37, if it is assumed that the form be *jhas-anta*, i. e. that the zero by which *ā* has been replaced (VI 4 112) be not *sthānivat* (The fact that the form which, strictly speaking, still runs *dhadhā*, is not *baṣ ādi*, raises no difficulty, as it may be presumed that the *asiddhatva* of VIII 4 54 has been tacitly neglected (cf VI 4 120))

Vārtt. 6. *Halo yamām yamī lope* (Pat.). *Halo yamām yamī lope prayojanam Ādityah. Halo yamām yamī lopah siddho bhavati* If Pāṇini had acted as Vārtt. 3 suggests, i. e. if the zero that has been substituted for *a* (by VI 4 148) would have to be regarded as being not *sthānivat*, the elision of *hal* would be brought about by VIII 4 64 *Ādityah*

Obs 16 — *Āditya + ya* (IV 1 85) > *Ādityya* (VI 4 148, cf I 4 18 and VI 4 129) (optionally > *Āditya* (VIII 4 64)) In regard to the last-mentioned sūtra the two semi-vowels are evidently regarded as immediately following on one another, i. e. the zero (VI 4 148) is considered as not to be *sthānivat*, i. e. Vārtt. 3 might cover I 1 58 (5)

Vārtt. 7. *Al-lopa-ni-lopau samyogānta-lopa-prabhrtisu* (Pat.) *Al-lopa-ni-lopau samyogānta-lopa-prabhrtisu prayojanam pāpacyateh pāpakṛtūh, yāyayater jāyastūh pācayateh paktūh, yāyayater yāstūh*. Such substitutions as are enjoined by VIII 2 30 and 36

in supposing the substitution of Zero for *a* and the suffix *i* to have actually taken place by VI 4 48 and 51 respectively, would also be brought about by *Vārti* 3 *pāpaktiḥ* (from *pāpacyate*), *yāyastīḥ* (*vāyayjate*), *paktiḥ* (*pācayati*) *yāstīḥ* (*yayayati*)

Obs 17. — In *pāktiḥ*, for instance, (from the causative *V pac*, without *it* according to VII 2 9) the *i* (III 1 26) has been elided by VI 4 51, if the zero were regarded as *sthanivat*, *c* could not become *> k* by VIII 2 30, because it would not be immediately followed by *jhal*. So also with *yāstīḥ* with reference to VIII 2 36, in the intensive-formations syneope of *ya* according to VI 4 48 and 1 66 respectively

From the above it follows that, as far as the substitutions mentioned above are concerned, I 1 58 (9) would be rendered superfluous by *Vārti* 3

Vārti 8/9 (8) *Dvirvacanādini ca* (9) *Vare-ya loṇa svara varjam* (cf I 1 57, *Vārti* 21) (Pat) *Dvirvacanādini ca na pathista-vyāni bhazanti Pūratrasiddhenaiva siddham bhazanti Kim avisesena? Nety āha* (9) *Vare-ya-loṇam svaram ca varjayitvā*. The *dvirvacana-vidhi* and following *vidhis* (in I 1 58) need not be given if *Vārti* 3 is accepted. Does this statement hold good universally? No, says Kātyāyana rightly, (9) the *vare ya loṇa*- and the *stara vidhi* must be excluded

Obs 18 — By putting *dvirvacana* at the head of the compositum (*dvirvacanādmi*) Kātyāyana was enabled to exclude the *padanta-vidhi*. In order to include the *dvirvacana-vidhi* itself, however, he was obliged to include two other *vidhis*, the *vare ya loṇa*- and the *stara-vidhi*, which do not conform to *Vārti* 3. By 9 these two *vidhis* had, therefore, to be eliminated

Obs 19 — Thus, if *Vārti* 3 be accepted, all the *vidhis* of I 1 58 (see p 32), with the exception of (1), (3) and (4), become superfluous. Examples (for the *vidhis* (5) and (9) see also on *Vārtikas* 6 and 7 above) (2) Gemination of consonants takes place in the *Triṣṭupī* only (VIII 4 46—52) and might, therefore, be accounted for by *Vārti* 3 as well as by I 1 58 (2) (*dadhi atra > da(d)dhy atra* VI 1 77) (5) and (6) In the development *śmasdhi* (*DhP* VII 14, III 1 78, VI 4 101) (1) *> śmsdhi* (VI 4 111) (2) *> śmṣdhi* (VIII 3 24) (3) *> śmsdhi* (VIII 4 41) (4) *> śmddhi* (VIII 4 53) (5) *> śmddhi* (VIII 4 58) (6) (option-

ally) > *śindhi* (VIII 4 65) in the second as well in the fifth transition the absence of *sthānnavatva* of the *a* (which has been elided by VI 4 111) might be inferred from I 1 58 (5) and (6) as well as from *Vārtt.* 3. (7) In *kurmah* (VI 4 108) short *u* would, despite of VIII 2 77, also be secured by 79, if *sthānnavatva* had been restricted according to *Vārtt.* 3 instead of I 1 58 (7) (8) In accordance with I 1 58 (8) *V ghas* + suffix *ti* does become > *gdhi* (*sagdhi*) by VI 4 100, VIII 2 26 and 40, 4 53. the transition *gh* > *g* (VIII 4 53) might be explained with the help of *Vārtt.* 3 as well. (9) The 3rd pl *jaksuh* (< *jaghasuh*) arises by transitions according to the processes VI 4 98, VIII 3 60 and 4 55, the last-mentioned of which agrees with the *car-vidhi* (I 1 58) (9) as well as with *Vārtt.* 3.

The import of the above considerations (under a)) is that by adoption of *Vārtt.* 3 not only *luk* in VII 3 73 and *ca* in VIII 2 38 (see *Vārtt.* 4 and 5 respectively) might have been spared, but also the greater part of I 1 58 (i. e. I 1 58 (2) and (5)–(9)) might have been dispensed with

b) Disadvantages

Only a few disadvantages would be the consequence. They are mentioned in

Vārtt. 10, which runs *Tasya dosah samyogādi-lopā-latva-natvesu.* (Pat. *) *Tasyaitasya laksanasya dosah samyogādi-lopā latva-natvesu* (a) *samyogādi-lopah kāky-artham, vāsy-artham* (*Skoh samyogādyor ante ca iti lopah prāpnoti*), (b) *latvam nigāryate, nigālyate* (*Acī vibhāsā iti latvam na prāpnoti*), (c) *natvam māsavapantī, vṛhivapantī* (*Prātipadikāntasyeti natvam prāpnoti*) *Vārtt.* 3 would not hold good with reference to (a) the *samyogādi-lopā*-, (b) the *latva*- and (c) the *natva-vidhi*-. (a) *samyogādi-lopā kāky-artham, vāsy-artham* in spite of VIII 2 29 (*Skoh samyogādyor ante ca*), which enjoins syncope (of *k* and *s* respectively), (b) *latva nigāryate* and also *nigālyate*, in spite of VIII 2 21 (*Acī vibhāsā*), by which the latter form is excluded, (c) *natva māsavapantī, vṛhivapantī*, in spite of VIII 4 11 (*Prātipadikānta* [-*num vibhaktitsu ca*]) which admits of *n*.

Obs 20. — (a) *Kāky artham, vāsy-artham* In spite of *Vārtt.* 3, but entirely in accordance with I 1 57, the *y* is regarded as a vowel, before which *k* (*s*) is not syncopated (cf *Vārtt.* 1 on VIII 2 23) (b) *Nigālyate*, too, (pass of

the caus *V gr*) is quite regular (VIII 2 21), as either *sthānivattva* of the speech-sound *z* (elided by VI 4 51) according to I 1 57 — by 38 *jar-* and *car-*consonants are excepted, semi vowels are not — or *pratyaya-laksana* according to I 1 62 has to be assumed. (It is, indeed, open to question whether Pāṇini should recognize the form with *l*, which is not on record in classical language¹⁾ and which does not occur in the *Kṣrataraṅgīnī* either²⁾)
 (c) The *n* of *māsavapam* (from *-vapana-*) is not optionally cerebralized by VIII 4 11, as the zero which has been substituted for *a* (by VI 4 148), being regarded as *sthāniat*, does not conclude a *prātipadika*

(Since no *paribhāsa* corresponding to the said *Vārtuka* has been laid down by Pāṇini, the above explanations do not affect the reasonings of § 6 A 1 regarding the (*samjñās* and) *paribhāśās* of Pāṇini. Their universal validity must, therefore, be maintained.])

B PARIBHĀSĀS WHICH DO NOT OCCUR IN THE AṢṬĀDHYĀYĪ

Of the *paribhāśās* which are repeatedly met with in the *MBh* or may be deduced from it, which are quoted in the *Siddhānta-Kaumudī* and which, together with other *paribhāśās*, have been collected in the *Paribhāśenduṣekhara*, a great number certainly dates back to primeval conventions which, according to Vaidyanātha, surnamed Pāyagunda, go back even to Indra¹

Goldstucker supposes²⁾ that "however many of these old *paribhāśās* may have been additions made after Pāṇini's, though before Patañjali's time, we still have to admit that without a great number of them a proper application of his [i.e. Pāṇini's] rules is absolutely impossible. Without them many rules become open to equivocations and doubts, nay to such serious objections that it is hardly possible to conceive a grammarian of the mould of Pāṇini handing his work to his contemporaries in a condition so needlessly precarious, and so little credible to his skill" "We shall see", he continues³⁾, "that he [P] availed himself of the technical means of the older grammarians, and, in such a case, never gave any explanation of those technicalities, which must have been known to his contemporaries, and, therefore, required

¹⁾ Renou, *Grammaire*, p. 38 ²⁾ Liebsch, *Aṣṭataraṅgīnī* ³⁾ Goldstucker, *Pāṇini*, p. 113 seq., cf. Note 133 ⁴⁾ *Ibid.*, p. 115

no remark... He was compelled, to give such *paribhāṣās* as did not occur in the works of his predecessors, and were required as special maxims of his own work, but without exposing himself to the reproach of carelessness, he could omit all those *paribhāṣās* which were already in existence, and were available as well for the grammar of his predecessors as for his own". "A large number [of the *paribhāṣās*]" Belvalkar, too, remarks ¹⁾ "he [P] found already current in his day and so used them tacitly"

Conclusive force of *paribhāṣas* based on *jñāpakas* is, however, denied ²⁾ by Nāgojibhatta, unless they should occur in the *MBh*

Kielhorn thinks ³⁾ that "anyone. can arrive at no other conclusion but this that by far the greatest number of the *paribhāṣās* which have been collected and explained [in the *Paribhāṣenduṣkṛhara*] and by far the most important of them must either consciously or unconsciously have been adopted already by Pāṇini". He nevertheless acknowledges ⁴⁾ that there occur *jñāpakas* in the *Astādhyāyī* "which indicate that certain *paribhāṣās* are not universally valid, — in other words terms and expressions employed by Pāṇini for which there would have been absolutely no occasion, had Pāṇini in every case adopted a particular *paribhāṣā*, and which, as they have been employed by Pāṇini, indicate therefore that that particular *paribhāṣā* cannot have been regarded by him as universally valid"

Goldstucker goes so far as to say ⁵⁾ "that it is certain that several of these axioms [= *paribhāṣās*] were invented at later periods, either to palliate the shortcomings of Pāṇini or to make his rules so conveniently elastic as to extend from the time at which he lived down to a period of linguistic development, which could not but find them defective in many respects"

Now, for reasons that have been amply discussed ⁶⁾ in the author's *Purvātrasiddham* (Dutch edition, p 53—80) one is

¹⁾ Belvalkar, Systems, p 25 ²⁾ *PhI* on *paribh* XCIII, 5 ³⁾ *PhI*, Ir, Preface p XXIII ⁴⁾ *Ibid* p xxi ⁵⁾ Goldstucker loc cit, p 112

⁶⁾ It is argued there that *vipratishedha* in *Vipratishedhe param karyam* (I 4 2) is to be understood as *virodha* = conflict (in a general sense) and that *param* through out means "ista" i.e. that in each doubtful case such sūtras should be employed as bring about the desired development (comp *MBh* VII 1 95 on *Varit* 10, Vol III, p 276, I 4 *Ista-vacā para śabdak, vipratishedhe param yad istam tadbhavati*. Cf I 4 2 on *Varit* 7, end and IV 2 39 on *Varit* 1, end) This conception is afforded by the fact that, were it otherwise, a great number of developments could

rather induced to surmise that all the said *paribhāsās*, as far as they do not occur in those *prāluṅkāhyās* which are anterior to Pāṇini, have been devised by later commentators, and that notably in the time between Pāṇini and Kātyāyana, the longest period from which certain information has not come down. Some may be of still later date since they do not seem to be known to Kātyāyana. This may, for instance, be inferred from the commentary of Patanjali on 1.1.55 in respect to the *paribhāsā Nānubandhakṛtam anekālvam bhavati* (PhI. no. 6), which would have rendered two *vārttikas* superfluous¹⁾

The above considerations would be well in accordance with the fact that some of the *paribhāsās* which are ascribed to the "older grammarians" (i. e. "Indra and others") by Nagojibhatta²⁾, distinctly refer to Pāṇini³⁾. They might, moreover, be reconciled with the observation at the end of the *Laghu-paribhāsā-Vṛtti* that some ascribe all the *paribhāsās* to Vyādi, who⁴⁾, in all probability, lived in the time between Pāṇini and Patañjali.

Should the above-mentioned supposition be right, it would follow, as *paribh.* 1⁵⁾ suggests, that, with respect to all the sūtras of the *Astādhyayi* in any doubtful case the reader is *suapte discriminat*, i. e. without having recourse to any *paribhāsā* except those which are mentioned by Pāṇini himself, to decide which substitutions shall be chosen.

In thus being led by his acquaintance with the resulting forms, the reader is naturally by no means prevented from acting as the intricate system of *paribhāsās*, among which the prevalence-*paribhāṣas* are the most important, may suggest him to

not be explained, either because the *paribhāsās* in question do not account for them or because they contradict one another, and, further, by the circumstance that *para vipratyākṣa* (in its literal meaning) is certainly not more frequent than *gūṛva vipratyākṣa*. Cases which furnish unmistakable examples of the former are, indeed, difficult to collect (The view⁶⁾ that *e* *g* to **eḡyābhyas* *e* is substituted for *a* by VII.3.103 in supersession of 102 (lengthening of *a*) because the former rule is *para* in regard to the latter, cannot be admitted since with reference to the position before 11.153 (plural⁷⁾) is evidently a restriction on 102.) That it is converted into *gūṛvavipratyākṣa* whenever the subsequent sūtra is *anādi* in regard to the preceding one, is easy to see (see p. 56, Obs. 1).

¹⁾ See Kielhorn, *Relation*, p. 37. ²⁾ *PAI*, p. 1. ³⁾ Goldastücker, loc. cit. p. 110 seq. ⁴⁾ Belvalkar, loc. cit. p. 27. ⁵⁾ Vyādyānato vīrtiprabhāṣa na hi samāhātāntarānam. ⁶⁾ *PAI*, II p. 156.

Examples — 1. To neut. pl. *grāmanī + e* (VII 1 19) two rules apply, I 2 47 (shortening of *i* at the end of the stem) and VII 1 73 (lengthening of the stem by *num(n)* before a vocalic flexional ending) In the building up of *grāmanīm*, I 2 47 must necessarily produce effect first, subsequently the augment *i* is added This result may, however, be arrived at by independent reasoning as well as by employing the prevalence *paribhāsa* (no XXXVIII 1²) In the latter case the supersession of VII 1 73 (by I 2 47) in spite of its being *para* and *nitya*, might be based on *paribhāsa* L according to which a *bahiranga*-substitution is *asiddha* in regard to an *antaranga* substitution³) (I 2 47 is *antaranga* because the causing factor (*nimitta*) of this process lies before the one of the process in VII 1 73) 2 As to the development of *Çiva + ā + ihi*, two sūtras, VI 1 87 ($\bar{a} + i > e$ *antaranga* being dependent on the root and its prefix) and VI 1 101 ($a + \bar{a} > a$ *bahiranga*) present themselves After the substitution of *guna* (for $\bar{a} + i$) according to the former sūtra, that of \bar{a} (for $a + a$) has been rendered impossible (but $a + e$ becomes $> e$ according to VI 1 95 ($\bar{a}n^1$)) The same form may, however, be obtained irrespective of any *paribhāsa* ($a + a > \bar{a}$, $\bar{a} + i > e$) 3 In accordance with *paribhāsa* L in *patu + i + a* first *v* would be substituted for *u* (before *i* *antaranga*) and afterwards *i* would become $> y$ (before \bar{a} *bahiranga*) The instrumental *patvī ā*, thus arising, however, also conforms to the *sthanivat* sūtra I 1 57 (see p 31) 4 The *asiddhatva* of the contraction $i + i > i$ (VI 1 101) in respect to the prefixing of *tuk* (VI 1 71) with regard to e *g* the development $adhī + i + ya > adhītya$ (which is taught by VI 1 86, see § 5 C, 4th example) might also be based on the *antaranga* *paribhāsa* (the addition of *tuk* to *i* would be *antaranga* as depending on the immediate sequence of *lyap*, whereas the contraction, as concerning two speech-sounds of two different words, would be considered as *bahiranga* and therefore *asiddha*) Etc

1) *Pūrva para nitya antarāṅgāpachāyānam uttarottaram bahiṅgā* 2) *Para* = subsequent (in Panini's Grammar), a rule is called *nitya* if it continues applying when another rule which applies simultaneously, has taken effect (ant *anitya*) A rule is *antaranga* in regard to another rule if the cause(s) of the substitution which is prescribed by it, lie before or within the cause(s) of the substitution which is prescribed by that other (*bahirāṅga*) rule 3) *Paribhāsa* L *Asiddham bahirangam antaranga*

Obs. 21. — As *tuk* in VI 1 86 would be superfluous in the case of the 4th example, those who approve of the *antaranga paribhāsā* are compelled to accept the restrictive *paribhāsā Nājanantarye bahistva-prakṛtiḥ* (PhI, no L)

Obs. 22 — It is obvious that on account of developments such as *sed + vas + as* (> *sedusah*) no doubt can arise. Here two sūtras apply simultaneously, VI 4 131 (*samprasārana* for *v*, caused by *as bahiranga*¹⁾) and VII 2 35 (prefixing of *it* to the immediately following *val-ādy-ārddhadhātuka* suffix *antaranga*¹⁾) As in the former sūtra the very form *vas* is mentioned by Pāṇini, whereas the substitution in VII 2 35 in a general sense depends on a following *val*-consonant, there can be no doubt that *samprasārana* must be substituted Afterwards *i* cannot be prefixed any more, because the *val* consonant has disappeared, and **sedusas* becomes > *sedusah* (VI 1 109 etc)

Obs. 23 — Nāgojibhatta states that the *antaranga-paribhāsā* (PhI, no L)¹⁾, which moreover — like many other *paribhāsās* — is restricted by several statements and *paribhasas*, does not concern the sūtras of the *Tripāḍī* (PhI, p 44, l 3 *Iyam ca Tripāḍyām na pravartate Tripāḍyā asiddhatat*) "because a subsequent rule occurring in the *Tripāḍī* (according to VIII 2 1) at any rate ceases to exist in regard to a preceding one, which latter rule, therefore, cannot be regarded as *bahiranga* and hence not as *asiddha*" (ibid, l 16 seqq) Cf MBh VIII 3 15, *Vārtt* 2, by which the author wishes to intimate that one cannot reject a statement (i c *Vārtt* 1) by having recourse to the *antaranga paribhāsā* in case the *antaranga* sūtra is contained in the *Tripāḍī* (PhI, p 45, l 6 seq)

Obs. 24 — Again it should be noted that the fact of Pāṇini's using certain terms raises objections to the assumption of his not adopting certain *paribhāsās*. Thus, if, for instance, *paribhāsā* L is not accepted, it remains unexplained why Pāṇini should have employed *it* in VI 4 132. For, as *u* (taken from the preceding sūtra) would have produced the same effect, this indication (*it*) might as well have been spared If *paribhāsā* L is adopted, *it* serves a purpose, for, in that case, a regular development of *iṭā + iāh + it* (III 2 64) + *ah* would — if *it* had not

¹⁾ See p 41, Note 3

been employed — be disturbed After the changing to *-a/uāh-* (VI 4 132, with *samprasāraṇa* from 131) and, afterwards, of *-a/uāh-* to *-a/uh-* (VI 1 108) the substitution of *guṇa* for *u* by VII 3 86 would be prevented by the *bahirangatva* of the substitution of *samprasāraṇa* ¹⁾ according to which *u* would be regarded as *vā*, i. e. VII 3 86 would not apply, and *viṣvaukha* VI 1 98 could not be accounted for

(The development is $v > \bar{u}$ (VI 4 132), $\bar{u} + \bar{a} > \bar{u}$ (VI 1 108), $a + \bar{u} > au$ (VI 1 89))

In a similar way *paribh* LIV, according to which a *bahiranga*-substitution of *lyap* should supersede even an *antaranga* substitution ²⁾, is inferred from II 4 36 as a *jñāpaka*. If Pāṇini had not adopted the said *paribhāsā*, in accordance with the *antaranga-paribhāsā* L first *jagdh* would be substituted for *ad* according to II 4 36 (second part) in the absolutivum *pra + ad + ktvā*, and subsequently *ya* for *tvā* (VII 1 37). Only if it is assumed that Pāṇini does accept *paribhāsā* LIV, so that the *bahiranga*-operation ($tvā > ya$ (VII 1 37)) must be performed before *ad* becomes $> jagdh$, the explicit mentioning of *lyap* in II 4 36 would be accounted for (*lyap* as a substitute for *tvā* (*ktvā*) is *ku* (p. 29), but it does not begin with *t*)

Obs 25 — If, as is done in the *MBh*, *paribh* LVI be rejected, according to which Pāṇiniyāḥ do not wish to further any substitution the conditions of which are removed by another substitution ³⁾, and if, at the same time, *paribh* L be approved of, sūtra VI 4 19 requires to be read *Cchvoh śud anunāsike ca* (strictly speaking *Tchvoh* etc.), for in that case, in all formations in which *ch* (before *kvip* and certain *ṇal* consonants) is preceded by a short vowel, this vowel gets *uk* by VI 1 73 (*antaranga* in regard to VI 4 19). In this case $V \text{ } \textit{prach} + na$ (III 3 90) $> \textit{prach} + na$ (VI 1 73) $> \textit{praçna}$ (VI 4 19).

If one is guided by Pāṇini's own sūtras only, VI 4 19 may run *Chvoh* etc. and $\textit{prach} + na > \textit{praçna}$ may be constructed by VI 4 19 directly. Afterwards the addition of *t* (to *a*) is excluded, because no *ch* follows any longer

¹⁾ *Samprasāraṇa* would be caused by *āss*, for it is on the ground of its being followed by this suffix that *riṣṭonā* is called *śha* (I 4 18), whereas the *guṇa* for *u* is due to *ṛi* (cf. I 1 62), consequently the substitution of *samprasāraṇa* would be *śhiraṇa* and, therefore, *śśāṣha*. ²⁾ *Paribh* LIV *Antarangaṇa aṇi vāṣṭha bahirangaṇa* *lyā* *t* *śhāṣha*. ³⁾ *Paribh* LVI *Antarangaṇa aṇi vāṣṭha*

(In this case VI 1 73 only applies to forms such as *gachati and the like.) The same construction would be suggested by the adoption of *paribhāṣā* LV, according to which a sūtra of the *angādhikāra* possesses greater force than a *samāhi-sūtra*.

Obs 26 — The relation between VI 4 19 and VIII 2 36, too, is worth noting, with reference to forms such as *prsta* (cf VI 1 16 (15), 108) *prāt* (*ā* and suffix *kvip* according to UnS II 57) from *V prach*. At first sight the *s* might be explained by VI 4 19 and VIII 2 36 as well as by the *Triṣaḍi-sūtra* alone. If, however, the *ch* of **prchta* had not become > *ç* by VI 4 19, *ch* would become > *s* by VIII 2 36, but likewise *tuk* would have been prefixed before *ch* (VI 1 73) (> *prchta*), which would have yielded *prsta* (VIII 2 36) > *prsta* (4 41). Consequently *ç* has been *pūrvavipratishedhena* substituted (by VI 4 19), and afterwards *ç* has been replaced by *s* according to VIII 2 36.

II ADHIKĀRAS

§ 7

A THEIR VALIDITY ALSO WITH REFERENCE TO SŪTRAS OF THE TRIPĀḌĪ

Adhikāras, like *paribhāṣās* (which by Patañjali (Kaiyata) are comprised under them), owe their force to their relation to other sūtras. As in the case of *paribhāṣās*, therefore (§ 6), one is entitled to ask whether the *asiddhanta* of the sūtras subsequent to VIII 2 1 should not render *adhikāraṇa* impossible in the *Triṣaḍi*, i.e. whether — VI 1 36, 4 22 do not come into account here — VIII 1 16 (*Paḍasya*) (starting from VIII 1 74), 2 1 (*Pūrvatrāsiddham*), 108 (*Samhitājām*), 3 55 etc. may have any meaning at all.

In the same way as has been done in the said section it may easily be proved, as is, moreover, shown by the very application of the rules, that the formation of *adhikāra*-groups also of sūtras subsequent to VIII 2 1, is possible, otherwise, this *adhikāra* would, indeed, become inconsistent with itself, and the following *adhikāras* would become meaningless. According to the

statements both of the *MBh* ¹⁾ and the *Kāç.* ²⁾, *Padasya* extends as far as VIII 354, and the greater part of the sūtras governed by it is, therefore, represented by *Triṣṭādi* sūtras, the *adhiḥkāra Pūrvatrāsiddham* governs the whole of the *Triṣṭādi*, while *Samhitāyām* is to be read into the sūtras of the last part of it (VIII 3 and 4). The last two *adhiḥkāras* partly overlap *Padasya*.

B THE ADHIKĀRA "PADASYA" (VIII 1 16)

1 The notion "*pada*" (*Word- and stem-padas*)

Two kinds of *padas* must be distinguished a) certain words, b) certain word-stems. Both of them are well defined.

a) *Word-padas*

Padas are, first of all (save the restrictions contained in I 4 15, see Obs. 3 below) all such words as end in *sup* or *tin* (I 4 14, cf IV 1 2 and III 4 78) *agniṃ* (IV 1 2), *bodhāṃsi* (III 4 78).

The designation *pada* remains applicable when the inflectional ending is either extended by an augment, or loses one or more speech-sounds by apocope *karatāṃsi* (III 4 92, cf 89) and *karatāṃsa* (98) are also *padas*.

As the forms of *sthānivratta* discussed in § 6 A 2 also hold good with reference to the terminology, the term *pada* is, further, retained for such casus and finite verbs in which the original ending (IV 1 2, III 4 78) has been replaced by another *detas* (VII 1 9) and *bodhanti* (VII 1 3) are likewise *padas*.

As a zero is likewise *sthānivratta*, the term *pada* must, finally, also be applied to inflectional forms in which the ending has been dropped (cf I 1 62, 63). Examples of *padas* of this kind are **rājān* (VI 1 68) (> *rāja*, VIII, 2 7), *bodha* (VI 4 105, via III 4 87), the *ṣaṣ* numerals in acc. pl. **ṣaṣcan* (VII 1 22) (> *ṣaṣca*, VIII 2 7), the nom. and acc. neutr. sing., as far as no *a* stem (VII 1 23: *luk*, as opposed to *lopa* in VI 1 68—70).

Special attention should be paid to indeclinables, first members of compounds and roots in *n* of denominative-formations. See the three following observations respectively.

Obs. 1 — Indeclinables are such inflection-forms as have been built up by IV 1 2, and have lost the ending

¹⁾ *MBh* on VIII 1 16, *Pratt* 1, Vol. III p. 371. ²⁾ *Kāç.* on VIII 1 16.

afterwards by *luk* (II 4 82) (with the exception of only a few *avyayibhāras* (II 4 83) and some fossilized casus (I 1 38 seqq)) Now, I 1 63, as an important restriction on 62, teaches that such blanks as are *lumatā* indicated (i.e. by *luk*, *ḥlu* or *lup*) are not *sthāntvat* with reference to those modifications of the stem which, according to Pāṇini's rules depend on the ending (Bohtlingk forgets to insert "also" in his translation of I 1 61) This restriction also refers to the terming of the stem in so far as depending on the suffix Therefore, although being reduced to *prātipadikas*, *avyayas* cannot be *padas* in the sense of I 4 17 (*stem-padas*) It is only owing to I 1 62 that they, nevertheless, get this designation word-*padas* they are (cf Obs 3) (Those with preserved *vibhakti-taddhita* (V 3 7 seqq) are *eo ipso* word-*padas*)

Obs 2 — First members of compounds drop the ending according to II 4 71 (exceptions according to VI 3 1 seqq) **rājanas* + *putrah* > **rājanputrah*, *kastam* + *ṣṛitah* > *kastāṣṛitah* — A compositum consists of a *pradhāna* (chief member) and an *upasarjana* (subordinate member) (cf I 2 43, 44, the *upasarjana* usually stands at the head (II 2 30), but not always (I 2 44)) Constructively Pāṇini always conceives the front-member (quoted in the nominative) as (the starting-point of) the compositum, hence as that which (in combination with something else) builds up the compositum (cf II 1 6 *avyayam*, 24 *distiṣyā*, 30 *irṣiṣyā*, etc., II 2 4 *praptāṣanne*, etc.) In this sense the compositum, i.e., therefore, that part of the whole construction which is quoted in the nominative, is called a *pratipadika* according to I 2 46, and as such all its members with the exception of the last, drop their endings (by II 4 71) This must be the import of Bohtlingk's somewhat obscure note on II 4 71 in which he says that *rājñah puruṣah* "als Compositum nach I 2 46 Nominalstamm [sei] und als solcher (nach II 4 71) die Casusendung [verliere]" It is not the whole that is *pratipadika*, but **rājñah* (*rāja*)

Obs 3 — *Luk* of *sup* takes place according to II 4 71 (*luk* from 58) when a casus becomes > *dhātu* or *pratipadika* *putram* + *ja(kyac)*, III 1 8) + *ti* > **putrayati* (I 4 71) > *putriyati*, VII 4 33) By I 4 15 the designation *pada* is confined here to *n* stems only Thus *rāyan* + *kyac* > *rājaya-* (VIII 2 7) > *rājīya-*, VII 4 33, with regard to the latter substitution VIII 2 7 is not *asiddha* according

to VIII 2 2) — Böhtlingk's translation of *nah* (I 4 15) as "Nominalstamm (auf *n*)" is wrong, if seen from Pāṇini's standpoint. Although after the taking effect of II 4 71 *putra* as well as **rājan* assumes the form of a *prātipadika* (serving as a *dhātu* *Supa ātmanah kya*, III 1 8) none of them is treated as such in this connexion (I 1 63). Both forms have, however, the value of mutilated cases and as such, but for I 4 15, both forms would be *padas*. It is only on the strength of the said restrictive rule that **rajan* (in **rājanyati*) does get this designation, whereas *putra* does not

δ) Stem-*padas*

Stem padas are 1) (according to I 4 17) all stems (in so far as they are no *bha* stems (18, 19)) before one of the suffixes mentioned in IV 1 2 seqq (up to V 4, end) (remote suffixes, cf. p. 9), provided they are not *sarvanamasthāna* (I 1 42, 43). 2) (according to 16) any stem that is followed by a *st*-suffix. Examples 1) **rājanbīh* (IV 1 2), **rājanmat* (V 2 94), 2) *bharadīya* (IV 2 115, suffix *chas*). Examples of *bha* stems are (I 4 18) *vāc* in denom. *vācyate*, gen. s. *vācas* (in both cases no change of *c* to *k* by VIII 2 30, as opposed to the development of *rajan* (word *pada* ')) in **rajanyate*, in which *n* is elided according to I 4 15 and VIII 2 7 and afterwards *a* is lengthened by VII 4 25, and to that of *bhavat* in **bhavatīya* (with *chas*), in which *t* becomes *d* according to I 4 16 and VIII 2 39), (I 4 19) *vidyutvat*, *tejasmat* (without transition *t* > *d* and *s* > *ru* etc. as prescribed by VIII 2 39 and VIII 2 66 etc. respectively)

Obs 4 — The combining of "complete words" with nominal stems before certain consonantal endings by the common term *pada* was occasioned by the fact that both formations follow the same euphonic rules in the phonetical coherence of the sentence (final voiceless mutes become voiced, etc.)

Obs 5 — A form like oom. s. n. **varis* becomes a mere stem by the apocope of *su* according to VII 1 23. This stem is a *pada*, but, according to I 1 63, it cannot be a stem *pada* in the sense of I 4 17, in spite of I 1 43 (*anapumsakam*), because the apocope of *su* has been indicated by *luk*. Hence it must be a word-*pada*, and that on the ground of I 4 14 and 62. Although, with regard to the application of VIII 2 7, it is of no consequence whether

the wide meaning of *prasanga*¹⁾ = *ocasso* here, so that the sūtra is meant to express. In order to indicate that in a certain form, i.e. either for the form itself or for part of it, a substitution is to be performed, this form is (in either case²⁾) put in the genitive. This is the *sthāna sasti*.

As appears from *Varit* 3 on I 1 49³⁾, the genitive (also) in an (*adhikāra*-) sūtra may have the technical meaning of I 1 49 as well as — in cases which are clear enough — one of the meanings defined elsewhere (II 3)⁴⁾. This latter is, for instance, the case in VIII 2 4, 5. On VIII 1 17, *Varit* 4 Patanjali remarks that, if the technical meaning were the only one, such words as *kumārjah* would not assume a *śarita* (according to 4) such words as *ṛksāh* no *udatta* (according to 5), inconveniences which are removed as soon as (*Varit* 5) *Padasya* is conceived as a *viśesana sasti*. Qualitative force of the genitive is also shown, for instance, in VIII 2 66, first part. According to the *tadanta vidhi* (I 1 72)⁴⁾ the genitive *sah* (VIII 2 66) represents a whole (*śai*). By the *adhikāra Padasya* we are informed that this whole is a *pada*. As *Padasya* appears here as an apposition to *śai*, it practically replaces it and consequently teaches us the end of which particular whole is meant. Accordingly *sah* becomes > “of a *pada*, ending in *s*” (*sakaranta padasya*). According to I 1 52 this genitive, again, means *sakaranta padantasya* (*sthāna sasti*) so that, finally, the translation becomes “For *s* at the end of a *pada* ending in *s*, *ru* is substituted”.

In accordance with *Varit* 1 on VIII 2 7⁵⁾ *Padasya* in all such sūtras as contain the indication *antasya* must be regarded as a *viśesana*-genitive. In VIII 2 7, for instance, the whole compound *prātipadikanta(sya)* indicates a speech sound (at the end of a *pada*). Here *tad* (of I 1 72) = *padasya*, which figures once more as an apposition, and, in the same way as in the

¹⁾ *Kūç* on I 1 49 *Sthāna śabdaç ca prasanga-naci* ²⁾ *MBh* on I 1 49, *Varit* 3, Vol I, p. 118 *Atayava śasthy-adānam upaprañt yoganayamdigdhatai*. Cf. also *Vārttikas* 2 and 4. ³⁾ Cf. *Kūç* on VIII 1 16 *Vahiyamāna śasthyāpekṣayā pada*

śyadhikṣṭorya śasthy-ortha-vyavasthā drastavya *kva* *cat sthāna śasthi* *kva* *cit atayava* *sasti*. ⁴⁾ I 1 72 *Yena vidhis tad-antasya*. A speech-sound or a form in regard

to which a rule has been laid down, indicates (besides itself) the whole that ends in that speech-sound (that form) (so that this rule may also refer to this whole).

⁵⁾ *MBh* VIII 2 7, *Varit* 1, Vol. III, p. 394 *Na lope nta grahanam padadhikarasya viśeṣanatvat* cf. *Varit* 6 on VIII 1 16

above example, acquires a qualitative sense, so that *prātipadikāntasya* becomes > "of a *pada* which ends in a *prātipadika*", i. e. *prātipadikānta padasya*. This, finally, by I 1 52 becomes > *prātipadikānta padāntasya*

One more example In VIII 3 29 seq. the whole after which the substitution takes place, is indicated by the final speech-sound (in the ablative¹) required by I 1 72 That this whole is a *pada* follows from the *adhikāra* read with I 1 52. According as prothesis or paragoge is meant, the substitute takes *t* or *k* respectively (by I 1 46)

3 Combining with *adhikāra* sūtras

It remains to be examined whether *Padasya*, which is said to be valid up to 3 54, also refers to the *adhikāras* VIII 2 1 and 108

It is obviously not fundamentally required that each sūtra that has been put under an *adhikāra* should also be governed by it An *adhikāra*, indeed, is only made so as to be applied in as many sūtras as appear to belong to it¹), in order to avoid repetition of the same words or terms

Obs 7 — Bhattoji somewhat ambiguously remarks on II 1 4, on the one hand, that the expression [*sup* (2)] *saha supā* appears "jointly and severally one at a time or two at a time" and, on the other, that "this aphorism (4) constantly will be applied in translating the sūtras that follow"

Sūtras that are sub-*adhikaras* need not *a priori* prove exceptions

In VI 4 22 all commentators rightly supplement the *angadhikara* Likewise *Samhitāyām* (VIII 2 108) apparently applies simultaneously with VIII 2 1, by which it is entirely overlapped

If, however, e. g. *Padasya*, which in this case might be conceived as a *viśeṣanasasthi*, were to be applied to *Pūrvatrāśiddham* (VIII 2 1) (which covers only part of the *Padasya*-sūtras), this thus restricted *adhikara* — further restricted by *Samhitāyām*, VIII 2 108 seqq — would be valid throughout the *Triṣṭāḍī*, i. e. numerous sūtras subsequent to 3 54 would be deprived of *asiddhatva*

As, on the contrary, the *asiddhatva* is apparently the common quality of all processes of the *Triṣṭāḍī* (see Obs 8), there is no occasion for such a combination (of VIII 2 1 with VIII 1 16)

¹) Cf. *Vārta* I on I 3 11, Vol I, p 271

and the putting of VIII 2 1 under VIII 1 16 produces no further effect

Obs 8 — The *asiddhatva* of certain substitutions which show themselves as irregularities might, indeed, also be explained by the help of well known *paribhāṣās* (instead of VIII 2 1). Thus, in spite of VIII 3 15, *r* in *nārpatya* (< *nr* + *pati* + *nya*) might conveniently be accounted for by arguing that VII 2 117 (*r* > *ār*) is *baluranga* and, therefore, *asiddha* with regard to VIII 3 15 (*r* > *h*) (*antaranga*, the former substitution is due to the suffix *nya*, whereas the causal of a supposed substitution of *h* would be the *p* which is part of the stem). Accordingly, *nār* had to be considered as *nr* in regard to VIII 3 15, i. e. this sūtra would not apply. It deserves notice, however, that the *MBh*, as well as *Nāgojibhatta*, reject the *antaranga-paribhāṣā* with reference to sūtras of the *Triṣṭupī* (see p. 42, Obs. 23). It is on this account that in the *MBh* in all such cases as might be explained by means of the *antaranga-paribhāṣā*, a special statement is made. Thus, in the case of *nārpatya* from VIII 3 15 it excludes ¹⁾ the position before the last member of compounds.

The discussion regarding *nārpatya* further shows that the said *paribhāṣā* may be alleged in explaining *pada*-sūtras as well as others. The former are, however, decidedly *asiddha* (see above). Whether or not this quality is possessed, does, therefore, not come into account here. Nor can the fact of the reader being beforehand acquainted with the resulting forms speak for such a combination (of VIII 1 16 with VIII 2 1), unless we were to presuppose an almost absolute absence of severity of system.

Under these circumstances it seems safest to extend the *Pūrvatrasiddham* over the whole *Triṣṭupī* and to explain the sūtras contained in it as has been maintained in the foregoing pages and has been done ever since *Kātyāyana*.

The sub-adhikāra *Samhitayām* (VIII 2 108) does not require any special discussion now. It holds good unrestrictedly up to the end. (Only (most of) those sūtras which are governed simultaneously by *Padasya*, as such refer to (the position at the end of) *padas*.)

¹⁾ *MBh* on VIII 3 15, *Vartt* 1, Vol. III, p. 426 *Visarjanīyo 'nutiara padē*

CHAPTER III THE LOGICAL PRINCIPLE

I SUBJECT-MATTER OF THE TRIPĀDĪ

§ 8

A SPHERE OF APPLICATION OF THE SŪTRAS CONTAINED IN I—VIII 1

The statements in the preceding chapter as to the scope of *paribhāṣas*, are based on the apparent meaning of the sūtras, as may be inferred from the real state of things¹⁾ On which processes that are capable of partaking of a certain development, the course of this development depends, and in what order, has to be determined for each doubtful case and for each stage of development, in view of the result that is to be arrived at

Examples — 1 Of the three sūtras that present themselves first, viz VI 1 66, 4 19 and VII 3 86, the first and the last must be rejected in order that *V sīv + Un* suffix *na* may become *> syona* Thus *sīv + na* becomes *> sīṭina*, afterwards *sīṭina* becomes *> syuna* (VI 1 77) and this *> syona* (VII 3 84) 2 Similarly *V bhā + avat* (*davat*, *UnS* I 63) + *su* first becomes *> bhavat* by VI 1 68, 4 143 In this stage two sūtras apply, VI 4 14 and VII 1 70 Although the latter sūtra be *para* and *ntyā* (p 41, Note 2), yet the long *ā* of the resulting form *bhavān* requires the former sūtra to take effect first (*> bhavāt* *> bhavānt*) (*> bhavān* VIII 2 23)

As to formations at such a stage of development as has been reached entirely according to sūtras contained in I—VIII 1, may be stated from experience that any sūtra may apply Accordingly the further development of such a form may be effected not only according to subsequent as well as to preceding sūtras, but also according to subsequent or preceding sūtras.

Examples — 1 (development in a forward direction) 1st ps **pacmī* (III 4 78) *> faca{nal, 82}* *> pacpaca* (VI 1 1,8) *> pacpāca* (VII 2 116) *> papāca* (4 60) 2 (in a backward direction) *a* The stem of the strong cases of the neuter as developed by VII 1 72 is changed afterwards by VI 4 8 (**phala* *> phalan-* *> phalān-*) *ō* (also with respect to the accent). Instr sing **āsthīā* (accented according

¹⁾ In the Dutch edition of the author's *Pūrvatrāṣuddham* this point has been amply discussed

to *PhS* II 3) becomes > *āsthānā* (VII 1 75) > *asthna* (by VI 4 134, 1 161, 158 respectively) (Removing of the first accent (on the strength of the *satī gīta*-principle, VI 1 158) may also take place after VII 1 75 has taken effect.) 3 (forward and backward) The gen sing **yusmada* constructed by VII 1 27 (< *yus* + *madik* (*UnS* I 139) + *a*) becomes > *yusmaa* (by the subsequent sūtra VII 2 90) > *yusma* (by the preceding sūtra VI 1 97) and *yusma* once again in two directions > *tataa* (VII 2 96) > *tava* (VI 1 97)

A sūtra contained in the *Triṣṭādi*, however, must not be anticipated

Obs 1 — This tends to a) a diminution as well as to b) an extension of the sphere of employment of the sūtras

a) The former takes place if in case the *Triṣṭādi*-sūtra should be *siddha*, new opportunities for the taking effect of a preceding sūtra would be created 1 *Rājabhik* (VIII 2 7), in spite of its ending in short "a", does not fall under VII 1 9 2 Such forms as *asma uddhara* (VIII 3 19) are not affected by the contraction rules for neighbouring vowels (VI 1 87 seqq) 3 The *c* of *gacchati*, which according to VIII 4 40 arises from *t* (VI 1 73) is not changed (to *c*) by VIII 2 30 4 Neither is *ñ* of *yūñjau* Development *yujau* (< *yuj* + *kin* + *au*, III 2 59, IV 1 2, VI 1 67) > *yunjau* (VII 1 71) > *yumjau* (VIII 3 24) > *yūñjau* (VIII 4 58)

b) Extension of the sphere of application is seen, if in case the *Triṣṭādi* sūtra were *siddha*, certain opportunities of the taking effect of a preceding sūtra would cease to exist 1 The *ā* of *pañcanām* (< **pañcannam*, VII 1 55) is, in spite of the loss of *n* (by VIII 2 7), constructed by VI 4 7 (*a* is considered to be *upadha*) 2 *ṣuskikā* (VIII 2 51) owes the only right *i* to the circumstance that, in regard to VII 3 46, it is considered to contain a dental suffix. Development *ṣustāka* > *ṣustūkā* (VII 4 13) > *ṣustikā* (VII 3 44, 46) > *ṣuskikā* (VIII 2 51) 3 *Amusmin* (VIII 2 80) with pronominal termination according to VII 2 102 and 1 15 (not *au* by VII 3 118) 4 *Lagna* (*V las*) with syncope of *s* and change of *j* to *g* according to VIII 2 29 and 30 respectively, in spite of the disappearance of the *jhal*-consonant by VIII 2 45

Obs 2 — In regard to preceding sūtras, such substitutes as are *asiddha* possess, as it were, complete *sthānirvadbhava*

(also *al-vidhan*) Whereas, for instance, in *V div* both the *u* and the *au*, which have been substituted according to VI 1 131 and VII 1 84 respectively, conform to the rules concerning vowels (loc *dyusu*, with *y* according to VI 1 77, nom. sing. *dyauś* without apocope of *s* (VI 1 68)), *rājabhīh* (VII 2 7) is, with regard to rules in respect of which VIII 2 7 is *asiddha*, throughout treated as **rājānbhīh*, i. e. the zero is regarded as *n* (and, on that account, no substitution according to VII 1 9 takes place).

Obs 3. — The *asiddhatva* of, for instance, VIII 2 7 on account of which such sūtras as bear on "a"-stems are prevented from taking effect naturally favours those sūtras which treat of "a"-stems Comp. the first examples under *a*) and *b*) above (Obs 1) Even a cursory examination shows that the benefit on the one hand is identical with the loss on the other. The division, therefore, essentially concerns the system only

B SUBJECT-MATTER OF THE TRIPĀDĪ RESTORATION OF VOWELS AND CONSONANTS

In now examining what stage the normalized forms spoken of in § 3, outset, have reached, by applying all sūtras to them, except those contained in the *Tripādī*, we find a provisional "dialect I—VIII 1" which may be outlined as follows

I *Vocalism*. Accentuation according to formulas which, in regard to the principal rule (VI 1 158), would seem "irregular" is omitted. This is also the case with the *pluta*-lengthening of vowels which, together with a particular accentuation, conveys a modal or sacral meaning (VIII 2 82 seqq.) and with a few other vowel changes (VIII 2 76—81)

Apart from these omissions vocalism has been all but restored, the modification (apophony) and *samdhī* (in- and external) has been brought about

II. *Consonantism* of the basic dialect, however, has undergone only a few changes, *vis* such as *ε g* are ordained by VII 3 52 seqq. (*bhaga* and the like, in which forms the changes are mostly connected with certain peculiarities of suffixes) The *samdhī* is scarcely dealt with (comp, however, sūtras such as VI 1 66, 68 seq., 4 19 seqq. (concatenation with VI 3 111—4 18'), VII 4 48 seqq. etc.), hence the nom *vāk* still = **vāc(s)*

The external *samdhī* is almost entirely left out of consideration (cf. however, sūtras such as VI 1 73 seqq. and the like)

Obs 4 — The predominance of vowel *samdhī* in I—VIII 1 is due to the fact that in several cases the in and external *samdhī* of vowels is governed by the same laws. Thus the contraction of kindred vowels that of *a* (*a*) with a following vowel, the transition of *i* (*i*) *u* (*u*) to semi vowel, and so on. This resemblance occurs, indeed, also in the *samdhī* of consonants, *e g* in certain assimilations but the consonantal system from which Pāṇini starts differs too much from the actual one as to allow him from the very outset to give formulas which would hold good for any stage of development. Not until **vacs bhavati* had passed through VI 1 68, VIII 2 30, 39 could it become > *iāg bhavati*. That the vowel plays an important part also in the *Triṣadī*, is shown in the construction of a kind of provisional *pada* (§ 9 B) ending in the consonant (the voiced one) that is usually heard before vowels (and voiced consonants and, in Pāṇini's time, also *avaśane*)

III Constructively all words, compounds included have been built up. All elements are present (With a view to this the *sthanvat* principle is introduced *raja(n)* (VI 1 68) remains *pada*)

Obs 5 — The first verses of the story of Nala when translated in "dialect I—VIII 1" would run as follows

**A'sit rājan Nalās nāma Virāṣena sutas bālin*
Upa padtas gunais istāis rupamant aṣva kovidas

The following remains for the *Triṣadī*

I Accentuation which is principally incompatible with VI 1 158 Restoration of some vowels

II Restoration of numerous consonants (by *ekadeśa* substitutions only, since as regards the elements, the words are complete)

II DIVISION OF THE SUBJECT MATTER

§ 9

A SPHERE OF APPLICATION OF THE TRIPADĪ SŪTRAS

That a sūtra of the *Triṣadī* must not be anticipated is taught by the sūtra which stands at the head of it *Purvātrasiddham*. According to this sūtra, VIII 2 4 (2 and 3 complete the *adhikāra*)

refers to the forms of the provisional dialect I—VIII 1 only, from which it forms a new one which neither creates new opportunities for applying preceding sūtras, nor removes such as already exist. To this "intermediate dialect" the following sūtra (VIII 2 5) is, in the same way, applied, and so forth. Hence all those sūtras which are *asiddha* with regard to any other sūtra have been put in the *Tripādi*, and that, if the sūtra in regard to which the *asiddhatva* finds expression, is itself a *Tripādi* sūtra, after this one "*Yeyam sapāda sapādhyāy anukrāntā, etasyam ayam pādono 'dhyāyo 'siddho bhavati*" is stated by the *MBh.* as well as by the *Kāç.* and the latter adds "*Ita uttaram cottarottara yogah pūrvatra-pūrvatrāsiddho bhavati*".

Thus in a form evolved according to a *Tripādi* sūtra, no substitution according to preceding sūtras is allowed.

Examples — 1 While the order in which sūtras contained in I—VIII 1, are applied, is quite arbitrary (see p 52) *rājabhik* is, in consequence of the *asiddhatva* of VIII 2 7, prevented from partaking of the process of VII 1 9, whereas **rāja* is, as a supposed **rājan*, subject to VI 4 8 (> *rājan* (> *rājā*, VIII 2 7)) 2 The *a* of the stem of **pañcannam* (VII 1 55) is, in spite of the elision according to VIII 2 7, not lengthened by VI 4 3, but as *upadhā* in a supposed **pañcannām*, by VI 4 7 3 Similarly loc sing of *amu* (VIII 2 80) does not fall under VII 3 118, 119, but (VII 2 102) as a formation of an *a*-stem under VII 1 15. (So, in order to make the instr sing conform to VII 3 120, the *asiddhatva* of VIII 2 80 had to be abolished (by VIII 2 3))

Unlike the processes contained in I—VIII 1, in which preceding as well as subsequent rules may intervene, those of the *Tripādi* are not affected by preceding ones

Obs 1 — For it is not because of the interference of VII 3 86 that **visphurya* does not become **visphūrya* by VIII 2 77 with regard to VIII 2 77, *visphurya* does not even exist, by VII 3 86 any formation in I—VIII 1 that conformed to VII 3 86 was affected by this sūtra, and so the stem-vowel of *visphurya* was gunated, *i e* it did not conform to VIII 2 77 any longer¹⁾ *Purvavipratishedha*

¹⁾ *MBh.* on VIII 2 1, Vol III, p 385, l 10—end and *Vartt* 1 *Yadi karyā kalam samjñā paribhāṣam ity ucyata ayam apti paribhāṣāṣṭi vipratishedhe param iti*

is frequent in the *Triṣṭupī*. A few examples of *pūrvavi-pratisedha* are: 1. *Kuriantī* > **kurvanti* by VIII 3 24 (> *kuriantī*, 4 58), not **kurtanti* by 4 2. 2. *Manar ratha* > *mano-ratha* (VI 1 114 etc), not **manāratha* (VIII 3 14 etc). 3. **Alaisdhiām* > *alaisdhiām* (VIII 2 25) (*alaisdhiām*, 3 79), not **alaisdhiām* (3 59) 4. VI 1 68 VIII 4 40 (41) apocope, not palatalization (cerebralization). 5. *Ṣab-daprach + kṛp* (UnS. II 57) + *sup* (IV 1 2) > — *prāch* (UnS. II 57, Pāṇini VI 1 67, 68) > — *prāc* (VI 4 19), not **prās* (VIII 2 36). In this stage VIII 2 36 (*ch*) is not applicable any longer, but —*prāc* becomes > —*prās* (VIII 2 36) > —*d* (39) (*t*, VIII 4 56) 6. *Vac + ti* > *vakti* (VIII 2 30), not **iacci* (4 40) 7. *Bharadiya* (IV 2 115) according to I 4 16, in spite of 18 8. *Deiaish* (VII 1 9) not **devebhish* (3 103) Comp., further, *Vārti*, 1 on IV 2 39, *Vārttikas* 10 and 11 on VII 1 96, *Vārti* 1 on VI 4 48 and cf. *paribhāṣās* such as nos LII, LIV, XCIII, 7/8, etc. See also § 11 on VIII 2 31: *anjadhat* with syncope of *a* and without *rddhi*

Except a construction be concluded, as *ṛ g kṛpta*, in which *ṛ* after having been ordained by VIII 2 18 remains definitely, a development that has reached the *Triṣṭupī* may be continued by subsequent *Triṣṭupī*-rules only

Example. — In a continually forward direction, therefore, **mahānt asī* > *mahān asī* (VIII 2 23) (Ved) > *mahānt Rasi* (VIII 3 9, cf 3) > *mahānt asī* (VIII 3 17) (*a* (*ā*), VIII 3 17, also = nasalized *a* (*ā*')) > *mahānt asī* (VIII 3 19)

Obs. 2. — The said manner of application of the sūtras lends to the *Triṣṭupī* the characteristic of building up in an exclusively forward direction. In this sense the final dialect develops from dialect I—VIII 1 by passing through as many stages as there are sūtras in the *Triṣṭupī*

Obs. 3. — The *asiddhatva*-principle has been applied twice elsewhere. All the sūtras of group VI 1 87 seqq are *asiddha* with regard to the cerebralization of *s* (VIII

sāpīhopatīṣṭhita Tatra ko doṣaḥ? *Vuṣṭhoryam*, *aragoryam* itī *gunad* dirghatvam *syād* *vipratīṣṭhena* *Ata* *uttaram* *goṭhate* (*Vārti* 1) *Pūrvatrāṇḍhe* *nāsti* *vipratīṣṭhe* *dhātūḥ* *uttarasya* (*Patañjali*) *Pūrvatrāṇḍhe* *nāsti* *vipratīṣṭhe* *Kṛm* *kūranam* *Abhāṣād* *uttarasya* *dhātūḥ* *ko* *sāvākāṣayoh* *samavartitayoh* *vipratīṣṭhe* *dhātūḥ*, *na* *ca* *pūrvatrāṇḍhe* *param* *pūrvam* *prati* *dhātūḥ* *And* *Vāmana* (*Kṛ* on VIII 2 1) *Vipratīṣṭhe* *param* *ity* *etā* *tu* *paribhāṣā*, *yena* *pūrvena* *lakṣanena* *sāha* *spādāḥ* *param* *lakṣanam* *atprati* *ṭṭyāṇḍhatvān* *na* *pravartate* (follow the same examples) Cf. p. 39, foot note *), end

3 55 seqq.) and the protthesis of *tuk* (VI 1 71 seqq.), while in the so-called *ābhya*-group (VI 4 22—end of the *adhyāya*) there exists a mutual *asiddhatā*. Examples p 26

B DIVISION OF THE SUBJECT-MATTER THE TRIPĀḌĪ A SYSTEM OF GROUPS

In tracing the manner in which the subject-matter of the *Tripaḍī*, as indicated in the foregoing section, has been spread over the sūtras, it becomes evident that the logical principle (§ 5, end) shows itself in several ways

1. Formation-groups

First the attention is drawn to the distinction of the sūtras according to the formations they bear on.

Although the distinction *pada-pāṭha* and *samhitā-pāṭha*-forms (as found in the *prātipāḥyas*) is not made by Pāṇini, he nevertheless distinguishes pause- and *saṃdhi*-forms, both of which he derives from a common ideal *pada*-form, which may, therefore, be regarded as an abstraction of both of them

Now, these provisional *pada*-forms are constructed according to the sūtras VIII 2 1 (4)—107 (incl.), which, therefore, from the nature of the case, chiefly bear on (the end of the) *pada* and which could accordingly be put under *Padasya* (VIII 1 16)

In these preparatory forms such operations are subsequently (VIII 2 108—end of the *Asādhyāyī*) performed as finally yield the definite *samhitā*- (and *avasāna*-)forms

Thus two Formation-groups arise

I Sūtras according to which ideal *pada*-forms arise (from the forms in I—VIII 1) VIII 2 1—107

II Sūtras relating to *saṃdhi* and pause-forms as derived from I (and sometimes from I—VIII 1) . VIII 2 108—4, end

Both Formation-groups begin and end with vowel-sūtras. Thus the vowel sūtras are divided into three groups (of which the middle one (VIII 2 76—108) forms a concatenation between the two Formation-groups), while the consonant-sūtras range to two larger groups

Obs 4 — On morphotechnical grounds two vowel-sūtras (VIII 3 33 and 4 57) are placed among the consonant-sūtras (§ 5 B, p 24, see further Chap VI)

2 Position groups

No less importance should be attached to the distinction of the sūtras according to the position in which the processes take place. In this regard Group II may be subdivided into three parts. The first part (up to VIII 3 54) is, like the whole of Group I governed by *Padasya* (VIII 1 16) and refers mainly (but not entirely) to the end of the *pada* (cf § 7 B 2). The following group (VIII 3 55—4 39) on the contrary excludes this position (comp. VIII 3 55, 4 37, see, however, sūtras such as VIII 3 101 seqq.) while the remaining sūtras of the third group for the greater part bearing on in as well as on external *samdhī* determines the definite *samhita* form of the beginning, the middle and the end of the *pada* (*Aśasana* forms are accounted for in proper places, cf § 14). Thus

A Sūtras relating to the auslaut¹⁾ VIII 2 108—3 54

B Sūtras for the greater part relating to the inlaut VIII 3 55—4 39

C Sūtras not relating to a particular position in the *pada* VIII 4 40—68

By combining the distinction according to the position with that according to the formation the following scheme arises

Formation-group I

(VIII 2 1 (4)—107) Auslaut processes

(The abstract *pada*)

Formation-group II { A Auslaut processes (VIII 2 108—3 54) } *Padasya*
 (VIII 2 108—4 68) { B Inlaut processes (VIII 3 55—4 39)
 (*Samdhī*) { C General *samdhī* processes (VIII 4 40—68)

3 Thematical groups

A third requirement of logical planning is finally attended to the bringing together of the sūtras into thematical groups.

That the given formulation of the sūtras should necessitate part of them to be neutralized is clear from the foregoing sections.

Examples — 1 After the syncope of *n* in **rajanbhis* and **rajanbhyas* (VIII 2 7) these forms conform to the rules VII 1 9 and 3 103. Lest **rajanis* and **rajanbhyas*

¹⁾ By auslaut, here and further on is understood the end of a *pada* word or a *śloka*.

should arise, VIII 2 7 is made *asiddha* (by VIII 2 1) in regard to the said sūtras. 2. Similarly the first *n* of **pañcannām*, although being elided by VIII 2 7, is regarded as being still in existence with reference to VI 4 7, so that *a upadhā* is lengthened by this sūtra. 3. *Prañān* (VIII 2 64) retains *n* and so it had to be made *asiddha* in regard to VIII 2 7.

Now, when on account of its relation to one or more sūtras contained in I—VIII 1, a sūtra had to be neutralized, it had to be put after VIII 2 1, i.e. in the *Triṣṭupādī*. This is, further, the place of any sūtra that required *asiddhatā* in regard to a *Triṣṭupādī* sūtra that was itself already *asiddha*.

According to what has been said above under B 1 and 2, the place of the sūtra in the scheme (under 2) is given beforehand. As for the rest, the place of the sūtras in their groups would remain rather arbitrary, and as to the order it would suffice if every sūtra were placed after the (*Triṣṭupādī*) sūtra in regard to which it is *asiddha*.

Obs 5. — No more would IV 1 2 require a particular mutual arrangement of the sūtras whether *para* be taken in its literal meaning or in the sense of *ista* (p. 39, footnote 6), since, as far as the technical order of the sūtras is concerned, the sequence of the sūtras in either case continues to be based on VIII 2 1 (see p. 56, Obs 1) (*pūrvavipratishedha*).

Hence Pāṇini was enabled to bring together within the main groups (see above under 2) those sūtras which materially belong together.

Examples — Thus a group is formed. (in I) *e g* by VIII 2 23 and 24 (simplification of final consonant groups), (in II C) by VIII 4 46—52 (gemination of consonants), etc.

Like the single processes, according to which Pāṇini's system of forms develops (§ 3), the groups to which similar processes combine, also get their own characteristic appearance. The division into thematical groups, thus, becomes the outstanding feature of the *Triṣṭupādī*. It is the following groups that develop ¹⁾

¹⁾ The demarcation of the groups remains naturally somewhat arbitrary. The groups themselves have been termed according to different criteria here (nature of the *sthāna*, the *adhiṣṭa*, the process itself, etc.), *prāsaṅgika* sūtras or groups are marked with an asterisk, in group I the numbers of groups which do not or not exclusively refer to the aulant, are parenthesized.

Formation-group I (The abstract pada)

(1) Accent of coalescing vowels	VIII 2 4-6
2 Syncope of <i>n</i> at the end of a <i>pada</i>	7, 8, 16, 17
(3) <i>M</i> (of <i>matup</i>) > <i>r</i>	9-16
(4) Alternation <i>r-l</i> (<i>r l</i>)	18-22
5 Simplification of final consonant-groups	23 24, 29
(6) Syncope of medial <i>s</i>	25-29
(7) Development of palatals and <i>h</i>	29-36 (37-41, 62, 63, 67)
(8) Media at the beginning of a root syllable > media aspirata	37, 38
9 Sonantizing and deaspiration of <i>jhal</i> consonants at the end of a <i>pada</i>	39
(10) Metaleptical assimilation of voice	40
(11) <i>ṣ</i> and <i>dh</i> , before <i>s</i> > <i>k</i>	41
(12) Alternation <i>ta na</i> in participles and participle-like formations	42-61
13 Final consonant before <i>kṛin</i> > guttural	62
*Final consonant of <i>√ naṣ</i> > <i>k</i> or <i>t</i>	63
* <i>M</i> final in a root > <i>n</i>	64 65
14 <i>S</i> (sometimes other consonant) at the end of a <i>pada</i> > <i>ru</i> (<i>r</i> , <i>d</i>)	66-75
(15) Lengthening of <i>i</i> and <i>u</i>	76-79
(16) Vowel- and consonant-change in <i>adas</i>	80, 81
(17) <i>Pluta</i> lengthening and accentuation of vowels	82-107

Formation-group II (Samdhi)

Position group A (Auslaut)

1. <i>I(u)</i> of according to VIII 2 107 prolated <i>e(o)</i> > <i>y(v)</i>	108
2 Nasal at the end of a <i>pada</i> > <i>ru</i>	3 1-12
*Syncope of <i>dh</i> before <i>dh</i>	13
3 Changes of <i>ru</i> and <i>r</i>	14-22
4 Changes of or after final nasals	23-32
*Initial <i>s</i> after <i>d</i> > <i>dhs</i>	29
* <i>Nepata</i> <i>uñ</i> after <i>may</i> consonant before vowel > <i>v</i>	33
5 Development of <i>h</i>	34-54

Position group B (Inlaut)

1 Cerebralization of <i>s</i>	VIII 3 55—119
*Idem of <i>dh</i>	78, 79
2 Idem of <i>n</i>	4 1—39

Position group C (Samdhu in general)

1a Assimilation (of <i>sthāna</i>)	40—44
1b Idem (media > homogeneous nasal)	45
2 Gemination	46—52
1c Assimilation (of <i>bahya prayatna</i>)	53—55
*Devoicing of final consonants in pausa	56
*Nasalization of final vowels in pausa	57
1d Assimilation (of <i>sthāna</i> and <i>abhyantara prayatna</i>)	58—62
1e Idem (of <i>abhyantara prayatna</i>)	63
3 Syncope of consonants before homogeneous consonants	64, 65
4 Svaritating of <i>anudatta</i> vowels after <i>udatta</i>	66, 67
5 <i>A virā</i> > <i>a samvṛta</i>	68

Obs 6 — According to the place where the speech sounds are produced the Hindu grammarians distinguished gutturals, palatals etc. According to the manner of articulation in the cavity of the mouth (*abhyantara prayatna*) they distinguished mutes (including the nasals) liquids, spirants *virā*-vowels (pronounced with expansion of the throat) and *o* (*a samvṛta*, pronounced with contraction of the throat), according to the articulation in the pharynx and larynx (*bahya prayatna*) voiced and voiceless, accented and unaccented aspirated and non aspirated, etc. speech sounds.

Although from a modern standpoint one is inclined to oppose the accent sūtras as one group to all others, and modern philology shows that particularly in an earlier period the accent played an all important part in Indian language, differences in tone are, as appears from the above, regarded in exactly the same way as *e g* the difference between *d* and *t*. Hence a distinction 'accent-sūtras' all the others must not be made in an analysis of the *Astadhyayi* and has, therefore, not been made use of in the above (In § 5 2 and 4 it has only served to facilitate a provisional synopsis).

Obs. 8. — With regard to some phonetical terms about the use of which grammarians disagree, the following will be settled here. Under *mutes* or explosives, only mediae and tenues (whether aspirated or not) will be comprised, the *nasals* (*m, n, ṇ, ñ, ṇ*) not included, under semi-vowels, according to Indian custom, *y, r, l* and *v*. *Liquids* are *l* and *r*, *spirants* the sibilants and *h*. For the rest *pratyāharas* will be employed as much as possible.

The mutual relation of the groups as attended with their proper development, their contents and final shape will be described in chapter VI. It will be shown there to what extent Pāṇini was enabled to appropriate his mnemotechnics to a treatment of the subject-matter, so as to keep the *asiddhatva*-principle continually in concord with the logical one.

The possibility of bringing these two principles into line with one another will be pointed out in Chapter V. A discussion of the notion *asiddhatva* and of the means of recognizing it, will be taken up first now (Chap. IV).

CHAPTER IV. THE ASIDDHATVA PRINCIPLE

I THE NOTION ASIDDHATVA

§ 10

A. PRIMARY ASIDDHATVA

A *sūtra* is *asiddha* in regard to another if, with respect to this latter, it is conceived of as not to exist. Consequently it adds to (excludes from) this *sūtra* all such cases as would not (would) in a certain stage of development or finally conform to it, if it were to be read together with the *sūtra* that is *asiddha*, i. e. if this had preceded.

Examples. — 1. In the development **akṣmat* (VI 1 197, suffix *ksī*, regarded as *nt*, *OnS.* III 156) > *akṣanmat* (VII 1 76, VI 1 158) > *akṣanmat* (VI 1 176) > *akṣamat* (VIII 2 7) > *akṣavāt* (9) > *akṣanvat* (16) > *akṣanvāt* (4 2) the (Vedic) shifting of the accent from *anan(an)* to *matup* (VI 1 176) is based on actually and tacitly abolished *asiddhatva* of VIII 2 9 and 19 in regard to VII 1 176. In all the other transitions the development is merely continued. 2. The first change in **takṣanah* > *takṣnah* (VI

4 134) > *taksnah* (VIII 4 1) is due to the *asiddhatva* of VIII 4 2 in regard to VI 4 134, whereas the second change is a simple continuation

I. The forms to which a sūtra normally applies are such as arise according to sūtras which are *siddha*.

Examples. — 1. The *s* of the nom. sing. **devīs*, constructed according to IV 1 2 (*siddha*) becomes > zero by VI 1 68. 2. The *n* of *rājāns*, which comes at the end by VI 1 68 (*siddha*), is syncopated by VIII 2 7. 3. The *ā* being final now, becomes nasalized on the condition stated in VIII 4 57.

II. In an equally normal way those forms which in a former stage of development would fall under a rule, are not affected by it, if in virtue of sūtras which are *siddha*, they undergo such changes as render them unable to meet all the requirements any longer.

Examples — 1. *Aduksa* + *ātām* does not become > **iy-* by VII 2 81 because *a* becomes > zero by VII 3 72. 2. The *u* of *visphurya* does not change into *n* by VIII 2 77, because it has become > *o* by VII 3 86. 3. *Manasū* (VIII 2 66) becomes > *manasū* by VIII 3 15, subsequently the application of VIII 3 59 (*s* > *ś*) is excluded.

First of all, therefore, the number of forms which fall under a rule depends on the relation to sūtras which are *siddha*. By such sūtras cases are added (created) as well as excluded.

The opportunities for application are, however, likewise in a twofold manner, determined by sūtras which are *asiddha*.

I (III). Besides to cases which are afforded by sūtras that are *siddha*, a sūtra is also applied to such cases as it would not apply to, if certain sūtras which are *asiddha*, were *siddha*. By the *asiddhatva* of the one sūtra, therefore, cases are added to the other, which is *siddha*.

Examples 1. Just as nom. pl. **rājanas* becomes > **rājānas* by VI 4 8, nom. sing. **rājan* becomes > **rājān* by the same sūtra because VIII 2 7, according to which the *n* is syncopated, is *asiddha* in regard to VI 4 8. 2. Likewise **lasyta* becomes > *lajta* (> *lagta* > *lagna*, VIII 2 30, 45) according to VIII 2 29, because VIII 2 45, according to which *t* (of *ta*) > *n*, is *asiddha* in regard to VIII 2 29.

II (IV) Finally no more than to cases excluded by sūtras which are *siddha* does a sūtra apply to such cases as it would only apply to, if certain sūtras which are *asiddha*, were *siddha*. By the *asiddhatva* of the one sūtra, therefore, cases are excluded from the other, which is *siddha*.

Examples — 1 *Rajabhis* does not become > *rajais* by VII 1 9 as *a* although existing from the beginning (suffix *kanin*, *UnS* I 157) only becomes final by VIII 2 7, which sūtra is *asiddha* in regard to VII 1 9 2 *Pratan* does not become > *prata*, as the *n*, although standing at the end of a *pratipadika pada* (VI 1 67, etc., *siddha*) originates (from *m*) by VIII 2 64, which sūtra is *asiddha* in regard to VIII 2 7

In a ($2 \times 2 =$) fourfold manner, therefore, the number of forms a sūtra applies to, is determined

B SECONDARY ASIDDHATVA

Conversely, lest a sūtra should apply to too many or too few cases, the following conditions are to be fulfilled. Obviously the right tracing of the cases that are to conform to a rule, is secured only if, whether by sūtras which are *siddha* (*I, II*) or by such as are *asiddha* (*III, IV*) those substitutions which are desired or even not desired are secured or prevented respectively

Obs 1 — Thus — see example 1 under *I* — with regard to the construction **devis* > *devi* IV 1 2 had necessarily to be *siddha* in regard to VI 1 68. So *mut mut* with reference to the other instances under *I—IV*, if started from the resulting form

Cases *I* and *II*, in which it depends on sūtras which are *siddha* whether or not a sūtra takes effect require further investigation

Now, apart from VI 4 22 and partly from VI 1 86 a sūtra is always *siddha* in regard to another, if it occurs in *I—VIII* 1

If, however, a sūtra *a* which, in accordance with the above statements (*I, II*) must be *siddha* in regard to a sūtra *b*, has for some reason or other (*III—IV*) been placed under VIII 2 1, it must, on account of the said *adhikara* take precedence of *b*, *i.e.* *b* must follow on *a*, likewise takes its place in the *Tripadī*, and so automatically (in consequence of VIII 2 1) becomes *asiddha* in regard to *a*

This kind of *asiddhatva* which is due to the fact that a sūtra

that had to be *siddha*, is itself *asiddha* (in regard to other sūtras) can be distinguished as secondary *asiddhatva* (*asiddhatva* (2)) from the primary *asiddhatva* (*asiddhatva* (1)) treated of above

Obs 2 — That a sūtra possessing *asiddhatva* (2) is indirectly primarily *asiddha* (*asiddha* (1)) with respect to sūtras in regard to which the other sūtra is (primarily *asiddha* (*asiddha* (1)) goes without saying

Besides two kinds of primary *asiddhatva* (see III, IV above) there are therefore, as many kinds of secondary *asiddhatva*. So there are altogether $2 \times 2 =$ four forms of *asiddhatva*

Examples of secondary *asiddhatva* (For primary *asiddhatva* see above III, IV) I* 1 Sūtra VIII 3 17 had to follow on VIII 2 66 (which itself is placed in the *Triṣaḍi* on account of its relation to *c g* VII 1 9 (*bhṛsah*')) and thus became secondarily *asiddha* as in the case of inversion of both sūtras (by which VIII 2 66 would automatically become *asiddha* with regard to VIII 3 17) none of the *rus* of 66 would become *y* etc 2 VIII 2 76 had to follow on 66 in order that the long *s* of *āṣṭh* might be accounted for ($s > R$, s before r (R) $> i$)

II* 1 VIII 3 24 had to follow on VIII 2 7 and thus became *asiddha* (by VIII 2 1) lest *rajanbhus* should become $> \text{rajanbhus}$ 2 VIII 4 40 had to follow and thus, became *asiddha* in regard to VIII 2 30 ($c > k$) lest $rac + ti$ should become $> rac + ti$ (by VIII 4 40)

Obs 3 — Two more kinds of *asiddhatva* (2) which would correspond to cases III and IV (above under A) cannot exist as in both cases the subsequent sūtra has in any case to be placed in the *Triṣaḍi* (whether the preceding one belongs to it or not)

II THE ASIDDHATVA AS A PRINCIPLE

§ 11

A THE ASIDDHATVA A METHODOLOGICAL PRINCIPLE

The above (§ 3) indicated simplifications consist partly in the levelling of forms which more or less show points of resemblance in development. Especially such processes as are not connected with the phonical value of the forms whole elements therefore, could conveniently be combined in plain, general sūtras. Also

however, in the case of substitutions of and for single speech-sounds, uniforming could lead to simplification and shortening

Examples — 1. Thus IV 1 2 provisionally applies to any class of declension, subsequently it is "corrected" by VII 2 9 and the like 2 So also with the general conjugation paradigm III 4 78 3 In heteroclitic declension one stem is provisionally generalized, *e g* in *akṣi* the one with suffix *kṣi* (*UnS* III 156, *V ac*) in which subsequently *i* is replaced by *an* in certain cases (VII 1 75) 4 *Vana-*, which has been introduced as an *a*-stem, likewise gets *n* in the strong cases by VII 1 72. And so on

The type *ḡhi* (a general indication which has been arbitrarily chosen, and which is afterwards replaced throughout by exclusively new forms) is not very frequent (See VII 1 1 seqq 3 50 etc) As a rule one of the combined forms itself is employed as a norm which is, later on, partly replaced by the forms required

In all these cases the stencilled forms are intended to be combined with reference to as many rules as possible

In the first case (substitution of elements) the grammatical technical peculiarities which have been ascribed to the common *sthānin*, are *sthānivattvena* transferred to the substitutions (comp § 6 A 2) In the case of *ekadeśa* substitutions one may assume that all the qualities that have been ascribed to the *sthānin* (as a function) before, are retained by the partially changed forms

Thus equal qualities of unequal forms could be accounted for by the same sūtras

Examples — The different terminations instr pl (*bhis*, *bhir*, etc, *ais*, *aiv* etc) figure provisionally as *bhis* in I 1 62, 63, 4 17, II 4 71, 82, III 1 4 etc the noun stem *akṣi* counts in I 1 63, 4 17, II 4 71 etc, *mat* in IV 2 85 seqq, V 2 94 seq etc Had Pāṇini from the beginning specialized all cases, had he *e g* given *bhis*, *bhir* etc as the terminations instr pl, he would have been obliged to describe all particular cases in which these forms occur, which, in consequence of the *samdhī* phenomena, would have been highly cumbersome

As soon, however, as further combining is no longer helpful or would even involve such consequences as are not desired, restitution takes place Since there has been only one form before, this restitution may be accomplished by simple formulas

Usually as many forms as possible are again combined in one of the particular forms, to this form, whether or not first changed again by common processes, the same treatment is applied, and so on, until finally all particular forms will reappear. Whenever occasion arises or may be created, a combination of norms of different progressions takes place.

Examples. — 1. For the *i* of *akṣi an* is substituted according to VII 1 75, afterwards VII 1 73 still applies to *akṣi-*, from which the new norm *akṣin-* separates itself. While *akṣi-* may still become *akṣī-* (77), *akṣin-* (pl. *akṣin-i*) severs itself from *akṣin-* (by VI 4 8) To *akṣan-* (arising already in the first instance) first VI 4 134 and 1 161 apply, while *akṣn-* separates itself. 2. The *a*-stems partly (in the neuter) become *an*-stems by VII 1 72. Together with the one of other *n*-stems — e.g. *akṣin-*, see first example — the vowel is lengthened by VI 4 8. 3. According to VII 1 9 the provisionally general suffix instr. pl. *ḁhiṣ* is replaced by *aiṣ* in thematical declension. In combination with other forms (*deṣa +*) *aiṣ* subsequently conforms to VI 1 88. And so on.

In this sense Pāṇini's method may be called a developing one (comp. 5 3 A).

In consequence of the *saṃdhu*-phenomena, which are chiefly dealt with in the *Triṣṭuṭi*, it hardly occurs that a form is entirely constructed in I—VIII 1. As a rule the first ramifying process and partly also the further processes are accomplished in I—VIII 1. This holds good for substitutions of whole elements and also for such *ekādeśa*-substitutions as hardly give rise to an order of transitions which would disturb a normal development.

Examples — 1. *aiṣ* (in *deṣa + aiṣ*, see above) after having taken over the function of *ḁhiṣ*, is in internal *saṃdhu* affected by VI 1 88 again (*deṣaiṣ*) 2. *Akṣi-* > *akṣin-* (VII 1 75) and afterwards *akṣan-* as a *ḁha*-stem conforms to VI 4 134 (> *akṣn-*), or becomes > *akṣur-* (VII 1 73) to which VI 4 8 is applicable again in certain forms (VII 1 72).

As far as a development is brought about in I—VIII 1, it is left to the reader, who is led by his acquaintance with the result that is to be arrived at, to decide in which order the substitutions shall take place. It is also left to him to determine which processes shall not intervene in this preliminary development.

Example — Thus he decides that to the instr sing. **asthā* (p 52) VI 1 77 shall not be applied first — by which **asthyā* would arise, with which form the development would end, as VII 1 75 would cease to be applicable — but directly VII 1 75, which concerns the substitutions of *i* in the very form *asthi* (not *asthy-*)

Now in the case of *ekādeśa* substitution it may frequently occur that a particular order of ramification, combination, again ramification etc is not quite plausible. Had all those substitutions been placed in I—VIII 1, *i* e had it been left to the reader to determine the order of substitutions in all such cases, he would have been rather inclined either to frustrate desired processes or to occasion undesired ones by ramifying or combining either too early or too late, etc

Examples — 1. According to VII 1 9 *ais* is substituted for *bhis* in a simple way (both with *s*) Afterwards both forms undergo several other (accidentally almost similar) changes In combination with other *-s* formations *bhis* becomes $\text{> } bhisR$ (VIII 2 66) Along with other *R* formations this *bhisR* is retained or becomes $\text{> } bhi$ (VIII 3 14, VI 3 111), so, further, *bhih*, *bhis*, *bhih*, *bhih*, *bhis* Similarly *ais* becomes $\text{> } aiR$, which remains or $\text{> } ai$, *aih* etc Were VIII 2 66 to take effect before *bhis* $\text{> } ais$ (by VII 1 9) so that *bhis* would become $\text{> } bhisR$ first, to (*bhisR* $\text{> } bhih$ (VIII 3 15) $\text{> } a-bhis$ (VIII 3 34 and further on) VII 1 9 would, no doubt, apply, but only in such cases as are described in VIII 3 34 etc (unless VII 1 9 were formulated as follows *bhis* $\text{> } ais$, *bhisR* $\text{> } air$, *bhih* $\text{> } aih$ etc, all which cases would, moreover, have to be defined) 2 Were VIII 4 2 to be applied first (before VI 4 134) to *aksan-* (VII 1 75), VI 4 134 would serve no purpose with regard to *aksan-* 3 The same would be the case, with regard to the gen pl, if first **akṣam* should become $\text{> } *akṣi-nām$ (by VII 1 54) instead of **akṣan-ām* (75)

In order to prevent this, and to secure the possibility of making use of combinations also in these cases Pāṇini introduces the notion *asiddhatva*, by which the disturbing processes referred to above, are neutralized.

Obs 1 — As therefore, the transition *bhis* $\text{> } bhisR$ etc. was neutralized, VII 1 9 could simply run [*Ato*] *bhisā ais*, all common sūtras retain their value with reference to

both forms, while subsequently all further substitutions that are desired are, nevertheless, carried out successively (*bhis* > -R, -h, etc., *ais* > -R, -h etc.) Owing to the fact that VIII 4 2 is *asiddha* in regard to VI 4 131, the syncope of *a* in the *bha*-stem *aksan* (by VI 4 131) is secured (Afterwards cerebralization of *n* takes place according to VIII 4 1) In the same way the differentiation -mat -vat- had to be kept for the *Triṣṭādi* so that all *mat*-sūtras in I—VIII 1 also hold good for *vat* formations, which would not be the case, if VIII 2 9 seqq were applied first Etc

Obs 2 — There exists also a mutual neutralization, according to which either of two processes is considered to take place before the other (p 58, Obs. 3) In this way *V śas + h* may become *śadhi* (VI 4 35, 101), because according to VI 4 22 the substitution of 35 (syncope of *s* before *hi*) (put before 36, with a view to the *anuvṛtti* of *han*) is *asiddha* in regard to that of 101 (*hi* after consonant > *dhi*) and the latter itself is, in its turn, again *asiddha* in regard to the former

By neutralizing the processes referred to above, Pāṇini secures a desired, and as the case may be, common, preliminary development also in the said cases In the gradual development of forms the *asiddhatva*, thus, becomes an important means of rendering the forms appropriate for being combined, or longer combined than the *sthānivat* sūtras alone would admit of

Obs 3 — Combination of a process that is to be neutralized, with other processes (*ε g* in VIII 2 66, according to which sūtra not only *bhis* becomes > *bhiR*, but any final *s* > *R*) presupposes that these other processes share this quality That this will, indeed, as a rule be the case, follows from the circumstance that, also in Pāṇini's development, each stage represents an intermediate dialect which is, so to say, characterized by its own phonology *deris* becomes > *deri* in I—VIII 1 (VI 1 68) before rhotacism shows itself in a later stage (VIII 2 66) Were it otherwise, i.e. should Pāṇini have been obliged to bring the neutralization of certain processes in certain progressions into line with developments in other progressions which would obey other laws, he would have been incapable of performing his task

Obs 4 — As neutralizing serves a purpose with regard to *ekīdeśa* substitutions only, substitutions of elements as

such do not occur in the *Triṣṭi*. It is not the particle, but the speech sound *u* (which happens to be identical with it) that becomes *> v* by VIII 3 33 — This is well in accordance with the circumstance that, with regard to the elements, the words are already complete in I—VIII 1 (p. 55)

Obs 5 — It might be maintained that, with a view to transitions such as *bhavat > bhavāt* (by VI 4 14), sūtra VII 1 70 (infixing of *n*) should have been neutralized in regard to VI 4 14. Against this it may be alleged that, if VII 1 70 had been put in the *Triṣṭi*, other difficulties would have arisen with reference to other forms (*greyānsas*, VI 4 10¹). In such cases the reader himself is to decide which substitution is meant (cf. also **akṣam*, 3rd example p. 69)

In the theoretical development in Panini's system, the processes which have been put in the *Triṣṭi*, are, as it were, "of later date" than those in regard to which they are *asiddha* (Obs 3). Also in such an artificial genesis, however, the different "periods" show different tendencies. It is in consequence of this circumstance that a form which, after having arisen according to a sūtra of the *Triṣṭi*, — possibly after having been changed again by subsequent sūtras — meets again the conditions of a law of an earlier stage, whether or not in the same progression, does, nevertheless, not obey that law.

Example — In I—VIII 1 (VI 1 87 seqq.) a vowel is as a rule, contracted with a following one, both in in and external *samdh*. In the latter case the rule does not hold good for two vowels the first of which comes to stand at the end of a *pada* by VIII 3 19 (*ka āste > *kay āste*), not **kāste*)

Obs 6 — It may, however, occur that, as in historical development¹⁾, a former tendency repeats itself also in Panini's theoretical system. Thus the change of *i* and *u* to semi-vowels by VIII 2 108 does not involve, it is true, *yan* accent (4) but the change itself entirely corresponds to the "older" process V 1 77

Obs 7 — Peculiar relations are such as between the "older" process VI 1 68 (apocope of *s* after consonant in certain cases) and the "later", more general process VIII 2 23,

¹⁾ Cf. e.g. Boer, *Oudnoorsche Handboek*, § 83 seq. and § 88

the former of which had, nevertheless, to be mentioned before, because in the meantime the *n* of **rajan* has been dropped according to a process which does not reoccur after VIII 2 23 has taken effect (*bhavanī*)

Obs 8 — In a few cases a process in I—VIII 1 had to be neutralized in regard to a *Tripadi* process, i.e. a process which was itself already *asiddha* in regard to one or more processes of I—VIII 1 (*Ko'scat*, cf p 26 and p 57, Obs 3)

Obs 9 — From the nature of the case it is out of the question that in cases in which he applies the *asiddhatva* principle, Pāṇini should have had in mind a historical development. One may presume intuition, as far as forms are concerned which, in Pāṇini's time, were not yet so divergent as not to admit of being conceived as etymologically equal. It is, at any rate, in these very cases that Pāṇini often arrives at a striking conformity or discrepency, which is the same. In *rajan-*, for instance, he generalizes the *n*, so that the lengthening of *a*, which cannot be disconnected from its having formerly been followed by *n*, is rightly effected by VI 4 8, as VIII 2 7 has been neutralized. On account of the same *asiddhatva* *rajabhis* (conforms to IV 1 2, but) is rightly not affected by VII 1 9. See further observation on p 14.

Chance sometimes favoured Pāṇini.

Example — Thus *ṣṣṭika* could get *i*, because with regard to VII 3 44 (46) the form was still **ṣṣṭakā*.

On the other hand conflicts would not seldom confront him.

Example — Thus *e g* in cases of analogy. In consequence for instance, of the fact that *n* had been generalized in *pancan*, and VIII 2 7 had been neutralized (on account of other relations) the gen. pl., which borrows the long *a* from the *a* stems, did not conform to VI 4 3, this lengthening had, therefore to be accounted for by a separate sūtra (VI 4 7).

The *asiddhatva* principle serves the reader in that it assists him in determining the order of the substitutions.

Above all things, however, it is used for the sake of brevity.

Obs 10 — Thus — summarizing once more — to VII 1 9 need not be added "(*ai*) or *ai*r, *ai*h etc, when *dhis* > *dhir*, etc." (with immediate or subsequent defining of all these cases), nor to VII 3 102 and the like "except when *a* comes to stand at the end of a *pada* by syncope

according to VIII 2 7", nor to VI 4 8 "likewise when *n* is dropped at the end of a stem *pada* according to VIII 2 7", nor to VI 1 158 "except when two accents are required by VIII 2 4 seqq", etc. And so on. In the case of mutual *asiddhatva* all these additions might have seemed desirable.

B. EXISTENCE OF ASIDDHATVA

It is imperative that the above (§ 10) mentioned requirements as to the mutual relation of two sūtras one of which is *asiddha* in regard to the other, should be met.

So the motive for neutralizing a sūtra may, as has been shown, be twofold: it may require either primary or secondary *asiddhatva*.

Now the *asiddhatva* of a sūtra is manifest from the fact that certain cases for application are either added to or excluded from 1) one or more sūtras which precede, whether or not in the *Tripāḍi* (in the case of *asiddhatva* (1)),

2) the neutralized sūtra itself, if cases are added or excluded by one or more preceding *Tripāḍi* sūtras (in the case of *asiddhatva* (2)).

From this it, conversely, follows that wherever can be shown that such has been effected, the *asiddhatva* of the subsequent sūtra will have been proved, i.e. the necessity of its being placed in the *Tripāḍi* (*As* (1)) or further back in the *Tripāḍi* than another *Tripāḍi* sūtra (*As* (2)) will have been explained. For examining this it will suffice that only the phonical value of the sounds in question be considered, for from what has been pointed out above (§ 10) it will be clear that the *adeṣa* *a*² which replaces the *sthānini* *s*² according to the second sūtra (the one which is *asiddha*) must have the value *s*² in regard to the first sūtra. See examples § 5, C.

Another means of proving the existence of *asiddhatva*-relation exists: inversion of the two sūtras in question. If, in consequence of such an inversion wrong developments are brought about, the *asiddhatva* of the subsequent sūtra will be ascertained. (Inversion of two sūtras both belonging to I—VIII 1 does not influence the result of a development, see § 8 A.)

In the following the *asiddhatva* of some sūtras, chosen at random so as to evade hitting upon the most fortunate, will be tested by applying it to an example or two. From each of the

groups distinguished in § 9 B one sūtra will, as a rule, be taken from the nature of the case — as the *Triṣṭādi* chiefly treats of consonants, whereas such processes or such as are conditioned by the existence of particular consonants hardly occur in I—VIII 1 —, primary *asiddhatva* will not always exist. In such cases, and also where secondary *asiddhatva* is conspicuous, the existence of this secondary *asiddhatva* will be stated.

Obs 11. — Although a discussion about the *asiddhatva* of the sūtras, whereby in the case of each sūtra the question would have to be posed whether all cases are accounted for by this *asiddhatva*, and whether this has nowhere been wrongly awarded, is beyond the scope of this analysis, yet some observations of this kind will be made here and there

1 Formation-group I (The abstract pada)

I (1) VIII 2 5 *Ekādeṣa udātenodāttaḥ* A vowel which originates by the coalescing of an *udātta*- and an *anudātta*-vowel, is *udātta* ¹⁾

Examples — 1 (With preceding *udātta*) *Agni* (V ag, DhP I 155 + nt, UnS IV 50) gets *udātta* on the suffix (III 1 3) *Agni* + au (cf III 1 4) > *Agni* (VI 1 102) with *udātta* of the final syllable. 2. (with following *udātta*) In (*kṛa*) 10 'ṛāh, 12 is *anudātta* according to VIII 1 21, but *aṇvāh* (suffix *kṛan*, UnS I 152) is *ādyudātta* according to VI 1 197. Via VIII 2 66, VI 1 113 and 87 (see under C) *vas* > *vaR* (before *a*) > *va u* > *vo* and *vo* + *aṇvāh* becomes 16 'ṛāh (VI 1 109) with *udātta* according to the present sūtra

Obs 12 — According to the next sūtra (VIII 2 6) the resulting vowel may also bear a *svarita* in certain cases. In the case of *abhinukṛta-sandhi* (VI 1 109) this *svarita* is imperative according to the *pratiśūkyas* (*SdhK.* on VII 2 6, Vol III, p 59, No 3659)

Asiddhatva In *sōdhamāh* (< *so adhamāh*, cf. Obs. above) the *o* is (the final speech-sound of *so* as well as) the initial syllable of *adhamāh*, so that this word gets two accents. It is apparently due to the *asiddhatva* of the present sūtra in regard to VI 1 158, that neither of the two accents needs to be removed

¹⁾ Böhtlingk readers "Samt dem vorangehenden udātta Vocal" Cf., however, Macdonell, *Vedic Grammar*, § 103 (so, too, Bergaigne and Henri) See the second example

Obs 13 — *Tudatī* consists of *V tud + śa* (III 1 77) + *çatr* (III 2 124) + *nīp* (IV 1 6) = *tud + a + at + ī* The thematical vowel is *udatta* (III 1 3) (while the other suffixes are *anudatta* according to VI 1 186 and III 1 4) It coalesces with the following *a* to *a* according to VI 1 97 and VIII 2 5, the resulting form *tudatī* becomes > *tudatī* by VI 1 173 (by the side of *tudāntī*, VII 1 80, VII 2 5) If, on the authority of the *Kāṣ* one rightly assumes that *antodātāt* in VI 1 173 is valid (from 169) with a view to forms such as *dadatī* (VI 1 189) (so Bhattoji and Böhtlingk), it should be remarked that, in this case, with regard to *tudatī*, and the like VIII 2 5 is not *asiddha*, because *tudatī* only becomes oxytonon according to this sūtra.

I 2 VIII 2 7 *Na-loṣaḥ pratipadikāntasya* *N* is dropped at the end of a stem which is a *pada*

Examples — 1 *Rājā* (*V rāj*, DhP 1874) + *kanin* (UnS I 157) + *su* (IV 1 2) > *rajans* > *rajan* (VI 1 68) > *rājān* (VI 4 8) (or first VI 4 8 and afterwards VI 1 68) > *rāja* (VIII 2 7) 2 *Rājīyati* (*rājan + kyac + tip*) > *rājanyati* > *rājayati* (VIII 2 7, cf I 4 15) (> *rajīyati*, VII 4 33) 3 *Rajāyate* (*rajan + kyan + tip*) > *rajanyate* > *rajayate* (VIII 2 7) (> *rājayate*, VII 4 25) 4 *Vrtrahā* (*han*) > *-han* (VI 4 13) > *-hā* (VIII 2 7)) 5 *Atra* (V 3 5, 10)

Obs 14 — Exceptions such as under VIII 2 8, 16 seq (the latter not being presented as exceptions), 68 (nom, acc sing *ahan* > *akaR*, cf VII 1 23) etc according to the sūtras in question'

Obs 15 — Forms such as acc pl *vrkān* do not conform to VIII 2 7, because *n*, although being final in a *pada* (VI 1 103) does not stand at the end of *pratipadika*

Asiddhatva exists only with reference to substitutions which bear on *a* declension, *b* accentuation, *c* terminology and *d* epenthesis according to VI 1 71 (VIII 2 2) Examples *a* *Rajabhīṣ* with *bhīṣ* in spite of VII 1 9 *b* *Rajavati* (suffix *vat*, V 1 117) *ādjudatta* in spite of VI 1 220 *c* *Pañca*, although it loses its *n* by VIII 2 7, is nevertheless named *sas* by I 1 24 *d* *Vrtrahabhyam* (< *vrtrahan + kvip + bhyam*) without *tuk* in spite of VI 1 71

Obs 16 — VIII 2 7 is, therefore, *siddha* in the remaining cases Examples (for the 2nd and 3rd example of the same examples above) 1 *Raja(n) + aṣva* *rajaṣva* (VI 1 101) 2 *Rājīyati* with *ī* according to VII 4 33 3 *Rājayate* with

$a < a$ according to VII 4 25 4 **Bhrūnahat chaya*, **brahmanat chattram* with *tuk* according to VI 1 73 (*tch* > *dch* (VIII 2 39) > *-jch-* (4 40) > *cch-* (55)) (cf *MBh* on VIII 2 2, *Varit* 3) 5 *Rajarsi* (VI 1 87, cf I 1 51)

I (3) VIII 2 16 *Ano nut* The suffix *vat* after stems in *an* gets the augment *n* in Vedic

Examples — 1 *Astha nvat* (**asthimat* > *asthanmat* (VII 1 76) > *asthamat* (VIII 2 7) > *asthavat* (9) > *asthanvat* (16)) 2 **Aksa nvat* (> *aksanvat*, VIII 4 2)

Obs 17 — Had *n* in the last example not first been syncopated (by VIII 2 7) in which case it could not have been regarded as a prefixed augment, it would not have been capable of cerebralization (VIII 4 37!)

Asiddhatva in regard to a sūtra in I—VIII 1 cannot exist, because the augment in question is the reoccurrence of a speech sound which has only been elided by VIII 2 7. So it is only the change of function of the *n* (part of the stem > augment of the suffix) that might be *asiddha*. In the very sūtra (VI 1 176) in which it should show itself, it happens to be tacitly ignored (see below under C).

VIII 2 16 is 'formally' *asiddha* in regard to 9, according to which sūtra in **aksamat* (VIII 2 7) *v* is substituted for *m* of *mat* (not for *n* of *nmat*) (cf I 1 54)

I (4) VIII 2 18 *Krpo rok lak* *L* (*l*) is substituted for *r* (*r*) in formations of *V krp*

Examples — *Klpta*, *caklpe*

Asiddhatva in regard to VII 4 66 appears from the second example *ar* (> *a*, VII 4 60) < *r*, cf VI 1 8, VII 4 62)

Obs 18 — VIII 2 18 is not *asiddha* with regard to sūtras such as III 1 110, VII 2 60, in which *klpta* is quoted with *l*, because Pāṇini might as well have given *r*

I 5 VIII 2 23 *Samyogantasya lopah* Of a consonant group at the end of a *pada* only the first consonant remains

Examples — 1 *Bhavant* (< *-ts* VI 1 68) > *bhatān*, 2 *ṣreṣānss* (suffix *tyasun* V 3 57, VI 4 10, VII 1 70) > *ṣreṣāns* (VI 1 68) > *ṣreṣan* 3 Nom sing *V pa + dumsun* (UnS IV 177) + *su* (IV 1 2) > *pumss* (VI 4 143) > *pumass* (VII 1 89 *s* > *asun* = *as*) > *pumanss* (VII 1 70) > *pumanss* (VI 4 10) > *pumans* (VI 1 68) > *pumān* 4 The

2nd and 3rd p s. aor. **abhārs(ṭ)* > *abhār* (VI 1 68) (V *bhv*, cf. VIII 2 24, so also with *ārak* (VIII 2 30, VI 4 73)).
5 **Achānds(ṭ)* (3rd s. aor V *chand*) > *achān*.

Obs. 19.—As the *antaranga-paribhāsā* does on no account hold good for sūtras of the *Tripādī*, the absence of apocope in formations such as *dadhy(atra)*, *madhu(atra)* cannot, as is done in the *Kācika*, be explained by means of this *paribhāsā*¹⁾ The *MBh* once more rejecting this *paribhāsā*, states a special *Varttika* (*Vārtt* 1: *Yanah pratisedhak*).

Although semi-vowels are treated of only in the immediately preceding sūtras, one is bound to assume that such forms as the ones just quoted have been overlooked by Pāṇini.

In view of the great esteem Pāṇini shows for Çākalya, who is often enough *pūjārtham* mentioned by him, it would a priori not be excluded that this irregularity would have to be explained by VI 1 127 (cf 72). If, however, VI 1 77 should be discarded in this way, certain sūtras would entirely or partly be deprived of their scope (cf sūtras such as VIII 2 4, 4, 47) — *Sthānivattva* in the sense of I 1 57, according to which the semi-vowel would have to be treated as a vowel, does not exist, because the apocope does not take place according to a *pūrva-vidhi*.

Asiddhatva of VIII 2 23 in regard to 7 appears from instances 1–3

I (6) VIII 2 28 *Ita Iti S* after *it* is elided, if *it* follows

Example — The 3rd sing. aor **alāvīst* becomes > *alāvī* (cf. VI 1 101) Development **alūst* (with *sic* according to III 1 44) > *alaust* (VII 2 1) > *alāvīst* (VII 2 35, VI 1 78) > *alāvīst* (VII 3 96) > *alāvī*

Asiddhatva of this syncope in regard to the substitution according to VII 2 35 is conspicuous (zero regarded as *s*) The *vrddhi* according to VII 2 1 and the taking of the augment *it* according to VII 3 96 before and after *sic* respectively might be attributed to the *sthānivattva* of the suffix according to I 1 62. As it is, however, not the *pratyaya*, but the speech-sound *s* that is elided,

¹⁾ The change *i* > *y* (*u* > *v*) is based on two speech sounds of two different words, whereas the apocope of *y(v)* (VIII 2 23) concerns the *dhy* (*dhu*) of *dadhy* (*madhu*), so the first substitution would be *bakraṅga* and therefore *asiddha* in regard to the apocope (*PAI*, tr, p. 269, Note by Kielhorn)

asiddhatva of VIII 2 28 in regard to the sūtras in question must be accepted here also

Obs 20 — VIII 2 28 is apparently *śiddha* in regard to the contraction $i + i > ī$ by VI 1 101.

I (6) (7) VIII 2 29 *Skoh samyogadyor ante ca* Initial *s* or *k* of a consonant group is elided if the group is followed by a *jhal* consonant or stands at the end of a *pada*

Examples — 1 *Babhrasj + tha* (VII 2 62) $>$ *babhrasjtha* ($>$ *-stha*, (VIII 2 36) $>$ *stha* (4 41)) 2 *Kūtatat, kāsṭhataṣ* (*V taks*, *apavada* to VIII 2 23, cf *MBh.* on VIII 2 1, *Varit* 1 and 2) 3 *Gorat* (by the side of *gorak*) ($<$ *ks*)

Obs 21 — For forms such as *kāky artham, vāsy artham* comp p 37, Obs 20

Asiddhatva is proved, for instance, by the relation to VI 1 68 with reference to aorists of *VV* in a vowel such as *apras, ajais* etc., in which *t* has been *pūrvā v-pratishedhena* dropped (Forms like *abhār* ($<$ *-rst*) do not belong here because *s* is not initial in the group, in these forms there is a twofold apocope according to VI 1 68 and VIII 2 24)

I (7) VIII 2 31 *Ho dhah Dh* is substituted for *h* before a *jhal*-consonant or at the end of a *pada*

Examples — 1 Loc pl *lik + su* $>$ *lihsu* $>$ *lidhsu* ($>$ *lidsu* (VIII 2 39) which becomes $>$ *litsu* (4 55) or $>$ *lidhsu* (3 29) (which is not affected by VIII 4 41 (cf 42') but becomes *lidsu* (4 55) $>$ *litsu* (idem))) 2. *Lik + ta* $>$ *lidhta* ($>$ *lidhdha* (VIII 2 40) $>$ *lidhdha* (4 41) $>$ *lidha* (3 13) $>$ *lidha* (VI 3 111))

Asiddhatva **Gudalidhmān* without change of *m* to *v* according to VIII 2 10, in regard to which sūtra the present one, therefore proves to be *śiddha* Development *gudalidhman* $>$ *gudalidhman* (31) $>$ *gudalidman* (39) (optionally $>$ *gudalinman* (4 45))

Obs 22 — The explanation of the aorist forms *aujadhat* and *aujidhat* is remarkable as an example of ingenuous — or subtle — commentators' interpretation

The root of these aorists is formed according to the *DhP*-sūtra X 368 *Pratipadikad dhātī-arthe bahulam isthavaca* By the addition of this *śnic*, which is entirely treated as the *taddhita*-suffix *istha*, VI 4 154 seqq) to the *krt*-formations *ṛdha* ($>$ *rañ + ta*, VI 1 15, 108, VIII 2 31,

40, 4 41, 3 13¹⁾, VI 3 111 1)²⁾) and *ūdhi-* (suffix *ktin* of VII 2 9) the *VV ūdha* and *ūdhi-* arise. The reduplicated acorists of these roots are composed of the following elements

1 *Ūdha*

Āt (VI 4 72) + *abhyāsa* (VI 1 11) + *ūdha* + *nic* + *can* (III 1 43, 48) + *lun*.

The *Kāṣika* remarks (on VIII 2 1) *Caniti dvir-vacane kartavye dhatvadhātva stutva-dha-lopanam asiddhatvān nau ca yas t-lopas tasya sthānnad bhūvad ūhta*³⁾ *ity etad dir ucyate*, i.e. as regards the reduplication which takes place before *can*, in consequence of the *asiddhatva* of the different substitutions which lead to the transition *ht > dh* (VIII 2 31, 40, 4 41, 3 13), and of the *sthanivaltva* of the zero which is substituted for *t* (*t e a*) before *ni* according to VI 4 155 (cf *DhP* X 368) (not the form *ūdha(i)*, but) *ūhta(i)* (*t e.hta*, VI 1 2) is reduplicated (> *ūjadha*). The *abhyāsa ja* results according to VI 1 2, VII 4 60, 62, I 1 50, VIII 4 54. On the said *asiddhatva* the *j*, on the *sthanivaltva* the *a* of the reduplication is based (N B. The *a* in the last syllable of *aujadhāt* (*aujīdhāt*) is not this *a*, but the one of *can*, it is the *a* of the stem which, though having been dropped according to VI 4 155, is reduplicated as *a* (I 1 59). The syncope of *t* takes place before *can* Sūtra VII 4 93, which would give *t* (cf 79), does not come into account in consequence of this syncope. The whole development (for the sake of perspicuity arranged in a somewhat changed order) becomes as follows

ā + ūjadha (VIII 2 31, and so on) + *t + a + t >*

aujadhā (VI 1 90) + *t + a + t >*

aujadh (VI 4 155) + *t + a + t >*

aujadh + a + t (VI 4 51) > *aujadhāt*

2 *Ūdhi*

Aujīdhāt evolves in a similar way (< *ūdhi*). The changes *h > dh* etc. are regarded as *asiddha* and, thus, the original form in *hiti* (not *dhi*) is reduplicated, which yields *j* as the *abhyāsa*. The vowel of the stem being *i*, which regularly reduplicates as *i* according to I 1 59, the second *i* moreover having been syncopeated as in the case of *aujadhāt*, VII 4 93 does not come into account here either

¹⁾ See under C. ²⁾ *Ū*, not *ṽ* according to VI 3 112! ³⁾ Cf *Āṣ* on VI 3 112 *Ātarnatyeti kim? Ūdhak* and *MBH* *ibid*, Vol III, p. 175, l. 17 *Āthavarna grahanam kim-artham? Itā me bhūṭ ūdhak* ⁴⁾ *Hūta* is misprint

Note. Besides VI 4 155 sūtras VI 4 48 and 51 may be quoted for the syncope of the first *a* and the *i* in *aujādhāt en aujīdhāt* respectively. (Nīc is *ārdhadhātuka* and the *i*-roots in question are formed of stems)

I (8) VIII 2 37 *Ekāco baṣo bhas jhas-antasya s-dhvoḥ*. For a media (except *j*) at the beginning of a root-syllable, the corresponding media aspirata is substituted, provided the following vowel is followed by a media aspirata which stands at the end of a *pada* or which is followed by a suffix beginning with *s* or *dhv*.

Obs 23 — Böhtlingk's rendering ("Im Anlaut einer einsilbigen Wurzel etc") may be objected to, with regard to formations such as *gardhab(-p)* (denom. *gardabhayati* ¹⁾)

Examples — 1 Nom sing **-dugh* (VI 1 68, VIII 2 32) > *-dhugh* (> *-dhug* or *-dhuk*, VIII 2 39, 4 56) 2 The 3rd sing desid. *jighrksati* is derived from the *V grahsa* (III 1 7, without *i*, VII 2 12) > *grhsa* (VI 1 16, 108, *san* is *kit*, I 2 8), the reduplication evolves according to VI 1 1, VII 4 60, 62, 66 (60), 79 (> *jigrhsa* > *jigrdhsa*, VIII 2 31), the form *jigrdhsa* becomes > *jighrdhsa* according to the present sūtra (> *-ks* (VIII 2 41) > *-ḥs* (3 59))

Asiddhatva Secondary *asiddhatva* appears from the relation to 1 *g*. VIII 2 31, which sūtra is continued 1 *a*. by 37 In regard to 32 there exists 1s at the same time primary *asiddhatva*, because with reference to this sūtra any *dh* arising according to 37, is regarded as *d* (32. *aduhdhvam* > *adughdhvam*) (> *adhughdhvam* (37) > *adhugdhvam* (VIII 4 53))

I 9 VIII 2 39 *Jhalām jaṣo 'nte*. A *jhal*-consonant at the end of a *pada* is replaced by the corresponding media.

Examples. — 1 (*Lṣh + kṣip + su*) > *lidhsu* (31) > *lidsu* (39) (> *litsu*, VIII 4 55 or > *littsu* VIII 3 29, 4 55) 2 (Nom sing *viṣ + kṣip + su*) > *vis* (VI 1 67, 68, VIII 2 36) > *vid* (39, *vit* VIII 4 56) So 3 **viṣbhīh* > *viṣbhīh* (VIII 2 36) > *viḍbhīh* and loc pl *viṣ + kṣip + su* > *vissu* (VI 1 67, VIII 2 36) > *vidsu* (39) > *vitsu* (VIII 4 55) (optionally *vissu* according to VIII 3 29 and 4 55 (twice)) (by the side of Ved *viḥsu* ²⁾) 4 **Atibhīh* (VII 4 48) > *adbhīh* 5 (**-druh* > *-drugh* (*-drudh*) (VIII 2 33) > *-dhrugh* (*-dhrudh*) (37) > *-dhrug* (*-k*) (*-dhrud*) (*-t*).

¹⁾ *SJKA* on VIII 2 37, Vol. I, p 187

²⁾ *Themb*, *Handbuch*, § 154

Asiddhatva is shown by the relation to 37, according to which sūtra *godugh* (not *godug*) > *godhugh* (> *godhug*, *godhuk*, VIII 2 39, 4 56). It is, however, mainly the secondary *asiddhatva* which manifests itself with reference to all the auslaut-processes of the seventh group (**pak* (30) > *-pag*, **vād*h (31) > *-vād*) (etc VIII 4 56)

I (10) VIII 2 40 *Ṭhasas tathor dho'dhah Dh* is substituted for *t* and *th* at the beginning of a suffix, if a media aspirata precedes, except after (*dh* of) *dadh* (√ *dhā*)

Examples — 1. *Adugdha* (-*ht* > -*ght* (32) > *ghdh* (40) (> -*gdh* (VIII 4 53)) 2. *Adugdhās* (with *dh* < *th*) 3. *Buddhi* (*dh* + *t*)

Obs 24 — In order to derive *jagdha* from √ *ad*, Pāṇini gives the whole form *jagdh* as a substitute for *ad* (II 4 36) Afterwards *jagdh* + *ta* becomes > *jagdhda* > *jagdha*, VIII 4 53, 65

Asiddhatva The development of some of the forms which pass through the present process, is at variance with the literal conception of VIII 2 1. For, when *lsh* + *ta* > *lidhta* (VIII 2 31) > *lidhdha* (40) > *lidhdha* (4 41) > *lidha* (VIII 3 13') > *lidha* (VI 3 111'), processes in regard to which the previous ones are *asiddha* are twice resorted to. See on this subject below under C

Actual *asiddhatva* appears from the relation to VII 2 48 (*vibhāsa*), with reference to which sūtra forms such as *lobdhā* are apparently treated as formations with a suffix beginning with *t* (**lobhta*) Secondary *asiddhatva* is frequent (e.g. in the first two examples in regard to VIII 2 32)

I (11) VIII 2 41 *Ṣadhoh kah sī K* is substituted for *s* and *dh* before *s*.

Examples — 1. √ *vis* + *syati* > *veksyati* (> *veksyati*, VIII 3 59, also = future of √ *viṣ*, VIII 2 36) 2. *Lah* + *sī* > *ledhsī* (VIII 2 31) > *leksī* (41) (> *leksī* VIII 3 59)

Asiddhatva With regard to the construction of forms such as loc. pl. *lidh* + *su* (< *lksu*, VIII 2 31) sūtra 41 is *pūrva-vipratishedhena* superseded by 39. Consequently -*dhs* > *ds* (39, *ts* VIII 4 55 or *ts*, 3 29 and 4 55 twice), not **ks* (41). So also with *dvitsu* (*dvitsu*) and the like. At the end of a *pada*, therefore, a substitution according to 41 practically does not occur.

Primary *asiddhatva* is further apparent from such forms

as *jighrksati* in which *gh* is accounted for only if *k* is regarded as *dh* with respect to VIII 2 37 (cf p 80)

I (12) VIII 2 45 *Oditaç ca N* is substituted for *t* of *ta* in past participles of *odit* roots

Examples — 1 *Sphürgna*¹⁾ ($\sqrt{\text{sphürj}} + \text{ta} > -gt$ (VIII 2 30) $> gn$ (45) $\triangleleft -gn$ - VIII 4 2)) 2. **Bhujta* $> -gt$ - (30) $> -gn$ (45) $\sqrt{\text{tuosphürjā}}$ and *bhujō*, *DhP* I 254 and VI 124 respectively

Asiddhatva in regard to VIII 2 30 appears from both examples ($t > g$), in regard to 30 and 29 from participles such as *magna*, *lagna*, in which *s* is elided on the ground of a supposed suffix *ta*

Obs 25 — With reference to *magna*, however, VIII 2 45 must be regarded as *siddha* in regard to VII 1 60, otherwise *num* would have to be infixed according to this sūtra

I 13 VIII 2 62 *Kvin pratyayasya kuh* At the end of a *pada* for the final speech sound of a stem in *kvin* the corresponding guttural is substituted

Examples — 1 *-sprç* (III 2 58) $> sprk$ 2 *Dadhrç* (III 2 59) $> dadhrk$ 3 *Diç* (III 2 59) $> dik$ 4 *Pra + ac* $\triangleleft anc$, VII 1 70) + *kvin* (III 2 59) + *su* $> pranc$ (VI 1 67, 68) $> pran$ (VIII 2 23) 5 Nom sing *sraç* (to $\sqrt{\text{sraç}}$, III 2 59)

Asiddhatva in regard to VIII 2 23 clearly shows itself in nom sing *yun* (In case of inversion *yun* would have resulted ($< yunç$ *v-s*, III 2 59, VII 1 71, VI 1 67, 68))

In spite of Kaiyata, Haradatta and others²⁾, the present sūtra must not be regarded as an exception to VIII 2 36 The *satva* and the *kutva* sūtra (VIII 2 36 and 62 respectively) are entirely equivalent The *yaçta* sūtra (39) again is equivalent to both of them This being an established fact, *phrva* *upretisedha* is observed twice in the development of nom sing *diç* First *diç* (+ *v* + *s*) becomes *diç* by VIII 2 36 (cf VI 1 67, 68) (in spite of VIII 2 39 and 62), afterwards *diç* becomes $> did$ by 39 (in spite of 62) and finally *did* becomes $> dig$ by 62 If the stage *did* (39) had not been passed through, 62 would have given *dik* (cf I 1 50) 1 *ç* forms such as *digādhibhik* (employed also by Pāṇini, IV 3 54) would not be accoun-

¹⁾ Monier Williams, Grammar, § 541, cf Whitney, Roots, p 198, where only *sphürjta* is said to be on record

²⁾ Cf *Śikā* on VI 3 91, No 430,

ted for, as a rule according to which a tenuis before a vowel is sonorized does not occur in Pāṇini's system.

Sūtra VIII 2 63 however, is an *apavāda* to 39 (*ṣ* is a *jhal* consonant, and the conditions on which the substitution according to 63 takes place, are still more restricted than those of 39) Strictly speaking, from *jīṇaṣ* only the nom sing *jīṇaṣ* or *jīṇaṣ* may be constructed, and the media might occur (along with the tenuis) in pausa only *Maitr S I 4 13* gives *jīṇaṣ* (*ahutiḥ*) which does not agree with any sūtra of Pāṇini's, while forms with a guttural are not recorded at all

*VIII 2 64 *Mo no dhatoḥ* At the end of a *pada* *n* is substituted for *m* final in a root

Examples — *Praṣan* (V *ṣam* with *ā* before *kṣip*, VI 4 15), *praṣānbhik*¹⁾

Asiddhatva in regard to VIII 2 7 prevents syncope of *n* according to that sūtra

I 14 VIII 2 66 *Sa sajus ru* *Ru* is substituted for *s* final in a *pada* and for the *s* of *sajus*

Example — *Devas* > *devaR*, *aśvibhis* > *aśvibhik*

Asiddhatva In the only preceding sūtras in which the *adeṣa* (*ru*) occurs (VI 1 113, 114), the *asiddhatva* is ignored (see under C) Consequently *asiddhatva* only manifests itself in those sūtras in which *ru* is still treated as *s* Part of these sutras are, however, to be regarded as exceptions to VIII 2 66 (*ṣ g III 4 98 seq*) The sūtra is actually *asiddha* in regard to VI 4 14 (*supayah* < -as) VII 1 9 (*dhīśak*) and the like, according to which sutras those *sthaninah* are changed which do not (yet) show rhotacism of *s* according to VIII 2 66

In the *Triṣaṭi* itself VIII 2 19 likewise supposes *asiddhatva* of the present sūtra *nir ayanam* (< *nir ayanam*, cf VIII 3 102 *nir*) without change of *r* to *l*) (according to the commentators²⁾ to be distinguished from *nir ayanam* < *nir-ayanam*, with original *r*, cf. VII 2 46), so also with *dur-ayanam* (*r* < *s*) beside *dulayate* (*l* < original *r*)

¹⁾ Cf. Monier Williams, Grammar, § 179 and Renou, Grammaire, § 28

²⁾ Cf. *SdāK* on VIII 2 19 Vol. II, p. 147 — Owing to the fact, that *s* and *r* at the end of declinables after *s* and *n* are difficult to distinguish *nir* and *dur* (sandhi forms for *nir* and *dur*) are conceived as separate words In the *GP* *nir* and *dur* are quoted (under group 154, Nos 8 and 10 respectively) and they are said to be lacking in the Pandit edition of the *Kaṣikā*

VIII 2 72 *Vasusramsudhamsv anaduham dah* At the end of a *pada d* is substituted for *s* at the end of formations in *vas*, for *s* of *srams* and *dhvams*, and for the *h* of *anaduh*

Examples — 1 **Vīdatbhyam* > *vidvasbhyam* (VII 1 36) > *vidvadbhyam* 2 Nom sing (*parna*)*dhvat* (without num VII 1 70) 3 *Anadujihva* (name of a plant)

Asiddhatva in regard to VI 2 117 appears from forms such as *susrāt*, *sudhvāt* (suffix *kvip*, III 2 76), which, being regarded as formations in *as*, are *antodatta* according to the sūtra just mentioned¹⁾

I (15) VIII 2 77 *Halī ca I* and *u upadha* are lengthened in roots ending in *r* and *v* followed by a consonant

Examples — 1 (*Stīta* > *stīrta* (VII 1 100) >) *stīrna* (VIII 2 42) > *stīrna* (77) 2 *Pratīdīvanā* (*divanā* > *divnā* (VI 4 134) > *divnā*) 3 *Pupūrsati* (*ṛ* > *ur* (VII 1 102) > *ur*)

Asiddhatva In part necessitatis such as *visphorya* *guna* has been substituted according to VII 3 86 (*phūrti* > *vipratīṣṭha*)

Obs 26 — The *sthanvattva* of the *a* vanishes according to the *dirgha vidī* (I 1 57, sub 7)

I (16) VIII 2 80 *Adaso ser dadu do mah* In the casus of the pronominal stem *adas* which do not end in *s* (*ie* in all casus except in the nom acc sing n) *m* is substituted for *d*, and *u* or *ā* [for the vowel] after *d* Cf 81

Obs 27 — *Aser* = *a sakarantasya*, *dad* = after *d*, insertion "for the vowel" *e contextu*, the nom sing m and f do not come into account in virtue of VII 2 106

Examples — 1 Nom dual m n *adas* + *au* > *ada* + *a* + *au* (VII 2 102) > *ada* + *au* (VI 1 97) > *adau* (VI 1 88) > *amū* (VIII 2 80, I 1 50) 2 Nom dual f the stem *adas* becomes > *ada* + *a* > *ada* as in the first example, subsequently *ada* > *adā* (IV 1 4), *adī* + *au* > *adā* + *i* (VII 1 18) > *ade* (VI 1 87) > *amū*

Asiddhatva of this sūtra with regard to VII 1 9 appears from the *apavada* sūtra VII 1 11, which supposes that, with reference to 9, the stem is regarded as still ending in *a* The present sūtra is also *asiddha* in regard to VI 3 91, where *amūdrī* etc are apparently still regarded as *adūdrī* etc (In the case of inversion of the sūtras **amādrī* would have arisen)

¹⁾ Cf *Sāk* on VI 1 17, Vol. III p 175

The instr *amunā*, however, is accounted for only on the assumption of VIII 2 80 being *siddha* in regard to VII 3 120. This *siddhatva* is actually stated in VIII 2 3.

I (17) VIII 2 82 seqq *Vakyasya tēh pluta udattah*. The last vowel of a sentence becomes *pluta* (up to and including 105) and *udatta* (up to and including 99) in the following cases

Asiddhatva in regard to VI 1 158 (according to which sūtra all accents but one are to be removed), if read with other sūtras (such as VI 1 198) by which the accent would fall on another syllable than the final one, is proved by the double accent of vocatives in such cases as *Ām pacasi Devadattā* 3¹⁾ (VIII 1 55) — With second accent on the prolated diphthong in the loc. *yajñdpatā* 3v it²⁾

VIII 2 107 *Eco 'pragrhyasyaduraddhūte pūrvasyardhasyad uttarasyed utau*. If a diphthong which has been prolated according to VIII 2 83 seqq (except 84) is *apragrhya*, *a* 3 and *i* (*u*) are substituted for the first and last part of it respectively

Obs 28 — The *a* 3 is accented according to the sūtras in question, the *i* (*u*) gets *udatta* 3)

Obs 29 — According to the commentators⁴⁾, the said manner of plutation is brought about according to VIII 2 83, 90, 97 and 100 only, and these sūtra should, therefore, have been enumerated, all the more so as (cf *Ka* on the sūtra) in that way the restriction *aduraddhute* would have become superfluous

Obs 30 — If, in conformity with the commentators, one renders *akhyana* 105 by "narration", the final vowel of nearly all the words in a sentence might be drawn out. This cannot possibly be right

The above observations show sufficiently that a closer investigation as to whether the usual interpretation of the commentators be the correct one (by applying this, for instance, to the recitation of the *Same Veda*) would seem desirable. Cf also Bōhtlingk, *ChU*, p 103 (on p 51)

¹⁾ The first accent of *Devadattā* 3 (VIII 1 55, *apavada* to 19) is due to VI 1 198 (nom *Devadattah*, VI 2 48) ²⁾ *T S* 6, 6, 2, 3 see Wackernagel, *Altindische Grammatik* § 259 b ³⁾ *Ka* on VIII 2 107 *So yam a karah pluta yathavi sayam udatto mudattah svarito vedastavyah Id utau punar udattāu eva bhavatah* ⁴⁾ *SdHK* on VIII 2 107, Vol III, p 82

Examples — *Ayusmān edhi Agni-bhūtāzī* (*patāzu*) (VIII 2 83)

Asiddhatva. See above (VIII 2 82) and comp. the following sūtra. This sūtra is apparently *asiddha* in regard to sūtras VI 1 101 (no coalescing of *i* and *u*) and (cf VII 2 108) 127. See further above (VIII 2 82) and comp. the following sūtra. On the relation to VI 1 125 see below under C

2. Formation-group II (*Samdhi*)

Position group A (Auslaut)

II A 1 VIII 2 108 *Tayor j vāv aci samhitāyām* *Y* (*v*) is substituted for the *i* (*n*) of VIII 1 107, if a vowel follows.

Examples. — *Agnāzy Indram, patāzy udakam* etc. But *Pada-pātha* *Agnāz i Indram, patāz u udakam*.

Obs 31 — *Y* before *i* is usually omitted in the MSS (*Samparyatāz iñ, BAU, 6, 1, 2*)

Asiddhatva The *asiddhatva* of VIII 2 107 in regard to VI 1 77 (on the strength of VIII 2 1), is actually refuted by Pāṇini's enouncing the present sūtra, which repeats the former process. As this repetition is itself *asiddha* in regard to VIII 2 4, the shifting of the *jan-* accent according to this sūtra is prevented in Pāṇini's system of accentuation ¹⁾

Obs 32 — For the rest, this sūtra and the next few will chiefly show secondary *asiddhatva* in regard to sūtras of the First Formation-group, because the latter, in referring to the word *per se*, in a closer alliance (VIII 1 16) prepare for the former, which bear on the word in *samdhi* (for which reason, for instance, VIII 2 108 had to be preceded by 107) Accordingly secondary *asiddhatva* will mostly be indicated in the sequel, at first in regard to sūtras of the First Formation-group, henceforth gradually more in regard to (preceding) sūtras of the Second Formation-group

II A 2 VIII 3 1. *Matu-vaso ru sambuddhan chandasi. Ru* is substituted for the final consonant of the Vedic vocatives of stems in *mat* and *rat*

¹⁾ Cf *MBA* on VI 1 77, *First 2*, Vol III, p 53

Obs. 33 — The addition "in samdhi" is omitted here and henceforth

Examples — 1. (*Matuṣ*) *Marutvants* (*v* according to VIII 2 10, *num* by VII 1 70, preserved short *a* (*anuvrtti* of *asambuddhau* in VI 4 14 from 8)) > *marutiant* (VI 1 68) > *marutvan* (VIII 2 23) > *marutiaR* (VIII 3 1). 2. (*Kvasu*) *MidhvāR* (cf. VI 1 12, *V mih*)

Asiddhatva (2) (cf. observation above) in regard to VIII 2 23 appears from both examples

VIII 3 9 *Dirghād ati samāna-pāde* In the *Rgvede ru* is substituted for *n* at the end of a *pada*, if a long vowel precedes and the following word of the same *pāda* begins with a vowel, diphthong, *y*, *r*, *v* or *h* (Nasalizing according to VIII 3 2—4)

Example. — **Mahānts* (*Indro ya ojasā*, *RV*. 8, 6, 1) (*ā* according to VI 4 10, *n* by VII 1 70, suffix *ati*, *UnS*. II 84, is treated as *ugi*) > *mahānt* (VI 1 68) > *mahān* (VIII 2 23) > *mahāñR* (> *mahāñ*, VIII 3 17, 19¹)

Obs 34 — *RV* 9, 107, 19 *paridhīmR* (*ati*) according to VIII 3 4 also *-dhīmR*

Asiddhatva also of this sūtra in regard to VIII 2 23 is conspicuous.

*VIII 3 13. *Dho dhe lopah. Dh* before *dh* is syncopated

Example. — *Lsh + ta* > *lidhta* (VIII 2 31) > *lidhdha* (40) > *lidhdha* (VIII 4 41), and this (does not become > **liddha*, 4 53, but) > *lidha* (VIII 3 13¹) (> *lidha*, VI 3 111¹)

Asiddhatva. Examples of primary *asiddhatva* cannot be given, because the second *dh* is only constructed later on (VIII 4 41). *Asiddhatva* (2) in regard to VIII 2 31 (*shali*) appears from the above example For the lengthening of the vowel see under C.

Obs 35. — VIII 3 13 cannot be an *apavāda* to the *jaṣṭva-sūtra* (VIII 2 39), as *śvalidh dhaukate* (2 31) yields *-d{dh}* (according to VIII 2 39). Therefore VIII 3 13 cannot refer to the end of a *pada* If, further, VIII 2 40, 4 41 were not supposed to be *siddha*, VIII 3 13 would have no scope at all (*S-tutvasyūtra siddhatvam ācraṇād drastavyam*, *Kāç* on VIII 3 13).

¹) Nearly always in the *RV* text (Oldenberg, *Prolegomena*, p 428, on the relation of Çkaṭya to the *RV* cf *ibid*, p 490 seqq)

II A 3 VIII 3 14 *Ro ri* *R* before *r* is syneopated

Examples — 1 *AgmR rathah* > *Agni rathah* (> *Agni rathah*, VI 3 111) 2 *Punar raktah* > *puna raktah* (> *puna raktah*)

Asiddhatva(2) in regard to VIII 2 66 is supposed by the first example For the *siddhatva* in regard to VI 3 111, see the preceding sūtra

II A 4 VIII 3 23 *Mo 'nusvarah* At the end of a *pada* *m* is substituted for *n* before a consonant

Example — *Vanam hasati*

Asiddhatva It is clear that the *m* of *praçam* had to be changed to *n* (VIII 2 64, First Formation group) lest it should be changed to *m* by VIII 3 23 (*pūrva vi pratishedha*)

*VIII 3 29 *Dah si dhut* After a *pada* in *d* initial *s* may take the augment *dh*

Examples — 1. (*Nis + su* > *nissu* (VIII 2 36) >) *nissu* (39) either becomes > *-is-* (VIII 4 55) or > *-d|dhs* (VIII 3 29) (either > *tit* (VIII 4 55) (without cerebralization of *t* and *s*, VIII 4 42) or > *-dd|dhs* (VIII 4 47) (> *tit* (VIII 4 55)) 2 So also *çvalit saye* (VIII 2 31, 39) either > *çvalit saye* or *çvalitt isāye*

Obs 36 — If this *dh* were not *tit*, but *kit* (cf I 1 46), **nittsu* and *çvalitt saye* would have arisen (VIII 4 41, 55) (or *tit* in either case (4 47, cf 65)

Asiddhatva (2) in regard to VIII 2 39 appears from both examples

*VIII 3 33 *Maya nūo vo vā* After a word which ends in a consonant (except semi vowel, sibilant, *h* or *ñ*) *v* may be substituted for the particle *u*, provided a vowel follows

Obs 37 — At the end sibilants and *h* no longer occur at this stage (cf VIII 2 36, 39, 66 and 31 seqq)

Example — *Kim u uktam* (remains, as *u* is *pragrhya*, I 1 14, or) > *kim v uktam*

Asiddhatva That *m* does not become > *m* is apparently due to the *asiddhatva* of the present sūtra in regard to VIII 3 24

II A 5 VIII 3 37 *Ku prok h k h pan ca* The *h* before a voiceless guttural or labial mute remains unchanged or becomes > *h* (*jihramūhya*) or *h* (*upadhmanīya*) respectively.

Examples *Vrksah* or *vrksah karoti*, *vrksah* or *vrksāḥ patati*

Asiddhatva Sutra 37 well combines with 35 (by *ca* (= *iā* 1)) and is primarily *asiddha* in regard to this sūtra, according to which [*khari*] *ṣarpare* *h* is *pūrvavipratishedhena* retained (*vasah kṣaumat*, *adbhiḥ psātam*) *Asiddhatva* (2) appears from the relation to VIII 3 15 etc

Positon group B (Inlaut)

II B 1 VIII 3 55 *Apadantasya mūrdhanyah* For *s*, except at the end of a *pada*, *s* is substituted in the following cases (56-end of the *pada*)

Example — The *V aṣ* + suffix *sara* (*UnS* III 70) > *assara* (VIII 2 36) > *aksara* (41) > *aksara* (VIII 3 57, 59)

Asiddhatva The *asiddhatva* of this sūtra becomes manifest in regard to all those sutras in which *s* is still treated as *s*. Such sūtras are, for instance, I 4 19 (*vidur* in *viduṣmat* (VII 1 36, VI 4 131, 1 108) is *bha*), VI 1 8 (*siseva* and *sisedha* (VIII 3 59, VI 1 64), VII 2 49 and the like. In the *Trispādi*: VIII 2 41 (**vessyati*, with *s* in spite of VIII 3 59), 37 (**dhoksyate* in spite of VIII 3 59), theoretically also VIII 2 25 seq., as in *alavidhvam*, *akṛta* etc., the *s* as a dental has been syncopated according to 25 and 27 respectively (for 28 see p 77). For the relation to VI 1 87 seqq., cf p 57, Obs 3

*VIII 3 78 *Inah śidhvam lun litam dho 'ngat* After one of the speech sounds belonging to the *pratyākara* *m*, the *dh* of *-sidhvam*, *dhvam* (aorist) and *dhve* (perfect) is cerebralized, if these endings follow immediately on the stem

Examples — *Cyosidhvare*, *stirsidhvam* (by the side of *starisidhvam* or (79) *-sidhvam* (VII 2 42, with *va* from 41) (cf VII 1 100, VIII 2 77), so also with *pūrsidhvam* (*parisidhvam*, *sidhvam*) (cf VII 1 102) *acyodhvam*, *astirdhvam* (by the side of *astaridhvam* or (79) *dhvam* (VII 2 42) and *astaridhvam* (VII 2 38, with *dirghak* from 37)), so also with *apurdhvam* (*aparidhvam*, *-dhvam*, *aparidhvam*), *cakrdhve* (VII 2 13)

*VIII 3 79 *Vibhasetaḥ* The substitution according to 78 is optional, if the part of the word which precedes the suffix ends in *it*

¹⁾ Gelpke, *Anantabhatta* p 30 Cf *Kāṣ* VIII 3 37 *Ca karad usarjanīyaṣ ca*

Examples — *Lavisidhvam* (or *-sidhvam*), *alavidhvam* (or *dhvam*), *ajavidhvam* (or *dhvam*) (for these aorists see below, Obs, 41), *lulavidhve* (or *dhve*)

Asiddhatva The *s* of *-sidhvam* is due to the substitution according to VIII 3 57, in regard to which sūtra 78 (79) is, therefore, secondarily *asiddha*. The same *asiddhatva* appears from the relation to VIII 2 25. The *s* in the aorists had to be elided first according to the sūtra just mentioned, before the *r* could get the required position (immediately before the ending)

Obs 38 — According to the *Kaṭika* Pāṇini has added *angat* (in 78) in order to account for such formations as *pariveṇisidhvam* (intens optative of *V vis*). It must be acknowledged that the word-part *sidhvam* does not stand after the stem, but, on the contrary, consists of a part of it (*s*) + the ending (augmented by *styut* according to III 4 102) (If one considers the ending (*ṛ*)*dhvam*) only, neither 78 (the stem ends in *s*!) nor 79 (no *ṛ*) applies to this form). Instances like this one are rare, as the end of the stem should be identical with the beginning of the ending. A form like *upadidyidhve* (*dhve*?) (for which see Obs 43) is an isolated case. So it is far from probable that with a view to such formations Pāṇini should have added *angā*!

The following conception seems more rational

In the given stage of Pāṇini's developments the suffixes in question run *-sidhvam* and *ṛsidhvam*, *-dhvam*, *dhve* and *ṛdhve* (VII 2 35, cf III 4 115, 116). For the precative Pāṇini explicitly quotes *sidhvam*, it may, therefore, be assumed that, as regards the perfect, only the (original) ending *dhve* is meant. The endings in question are therefore *sidhvam*, *dhvam* and *dhve*. In consequence of the addition *angat* then, the precatives with *ṛsidhvam* and the perfects with *ṛdhve*, in which *r* (*ṛ*) belongs to the ending (I 1 46) (so that the word-part which precedes *sidhvam* (*dhve*) is not a stem) are excluded from 78. The *ṛ* aorists (type *alavidhvam*), however, still conform to 78, as *r* (*ṛ*) is the augment of *sic* (VII 2 35, cf III 4 114), and becomes the final speech-sound of the stem, on which *dhvam* follows after the *s* has been elided by VIII 2 25. Now Pāṇini admits also the dental in these aorists *ṛ-* on the other hand, also the cerebral, } precatives, }

perfects just mentioned. He could express the one as well as the other by the formula *Vishāsetah* (79)

With regard to *luṇ* this sūtra (79) is, therefore, a restriction, whereas in respect to *lu āḥṣi* and *lit* it is an extension

Since in the precatives and perfects no stem precedes, but stem + augment of the suffix, *angāt* is not understood in 79.

Obs 39 — As, therefore, the process (79) is confined to endings preceded by the very speech sound *it*, *inaḥ* cannot be valid either (in 79) in spite of the assertions of Indian and Western grammarians. *Anuvṛtti* of *inaḥ* would, moreover, lead to a clumsy construction, because *itah* (in 79) would mean *inaḥ paraśmād itah* ("after it which follows on in") i.e. would be supposed to qualify *sidhvam* etc. and would itself be qualified by *inaḥ*, which qualifies *sidhvam* etc. in 78

Besides, *ajantdhvam* and a few other examples given by Whitney¹⁾ contradict such an *anuvṛtti*

Obs 40 — Also if seen from a phonetical point of view, *anuvṛtti* of *inaḥ* is anything but probable. For most likely *-sidhvam* has originated from *-siddhvam* and the latter from *-siddham*. Thus it may be conceived that *siddhvam* > *siddhvam* > *siddhvam* > *sidhvam*

The question is, however, whether *s* has been inserted in all cases (cf Whitney, § 924)

In the aorists, as a rule, *ss* must be assumed (perhaps²⁾ with a few exceptions). The sound law *s* > *s* after *s* is of later date, and has obviously operated less intensively than that of *s* > *ṣ* after *s* etc., but it can hardly be accepted that the process was favoured by a preceding *m*-sound, so that uncertainty remains also here³⁾

In the perfects, in which the cerebralization has no phonetical base at all, as the *r*, being a reduction of the thematical vowel⁴⁾, was never followed by *s*, the substitution is exclusively due to the influence of the analogy of the aorist- and precativ-forms, which may have been carried out more or less consistently⁵⁾

¹⁾ Whitney, Grammar, § 901 ²⁾ Brugmann, Verh. Gr. II 3, 1, p. 411

³⁾ For *i* instead of expected *s* see Brugmann loc. cit., p. 414 ⁴⁾ Boer, Oergermaansch Handboek, § 217 ⁵⁾ Kielhorn gives optional *idhve*, if the *s* is preceded by a semi-vowel or *h* (= Pāṇini VIII 3 79) (§ 313), he admits of optional *s* before *idhve* after all roots except those which are mentioned by Pāṇini in VII 2 13 (§§ 304, 305). According to Thumb (p. 356) the cerebral is regular immediately after *s* and *r* only

Obviously "handelt es sich um einen Sprachprozess, den Pāṇini bemerkt und dessen Grenzen er festzustellen versucht hat"¹⁾ In none of the cases the cerebralization has been effected by the speech-sound which precedes the above *it* (79) and so it seems hardly plausible that Pāṇini should have observed that this cerebralization would be more distinct after *in*.

If so, the precativē *āsīdhvam* (*V ās*, double augment before the ending (*siyut*, and before this *it*, III 4 102, VII 2 35), handed down with *dh* exclusively), on the ground of which the *Kācīkā* argues that *ināh* is valid (in 79) (the root, which is identical with the stem here, does not end in a speech sound of *in*) need not be wondered at. The ending *dhvam* may never have been preceded by an inserted *s*.

Obs 41 — If it is accepted that *it* (in 79) means *it* of the personal ending only, all *is-* aorists (with stem in *it*) fall under 78 and *dh* would not occur here. The exclusive cerebral in the older language²⁾ points indeed to this conception, though Brugmann may think that *ajanīdhvam* etc. "genetisch ebensowenig zum sigmatischen Aorist gehören wie die von Indischen Grammatikern diesem zugerechneten *akṛta*, *adhita* und dergl."³⁾

Obs 42 — With regard to *-sidhvam*, in which *s* has been cerebralized on the conditions mentioned in VIII 3 57, *ināh* (57) is confined to *in* in 78 (cf. *vaksīdhvam*)⁴⁾ This *in* must be the second *in* of the *ḤS.* (*cakṛdhve*), and cannot have a wider meaning than it has in 57 (where it means = any vowel, except *a*, *ā* and *r*), because *h* before *s* has been changed according to VIII 2 31 seqq., *y* and *v* have been dropped by VI 1 66, and *l* does not occur. Stems in *r* are rare, as all the roots from which they could be derived (those in *r̄* and *r*) are *set*. The commentators do not give examples. Their occurrence may, however, be inferred from the employment of *ināh* (instead of *icāh*), which would, otherwise, serve no useful purpose. Some examples have been constructed above.

The aorists and perfects, too, are only such as are formed of stems in vowels or *r*, because, as appears from

¹⁾ Liebhich, *Pāṇini*, p. 58. ²⁾ Whitney, loc. cit. ³⁾ Brugmann, loc. cit. ⁴⁾ *MSA Varit* 1 on VIII 3 78, Vol. III, p. 444. *In grahanam dhātve ka varga nityti-artham* *Āṭṣ* on VIII 3 78. *In kar ite varttomāne funar in grahane ka varga nityti artham*.

an investigation of the *anti*- roots, stems in *y*, *l* or *v* are not constructed before the endings in question and *h* is changed according to VIII 2 31 seqq (*y* and *v* would, indeed, be dropped according to VI 1 66)

Ohs. 43 — In the perfect-form *upadīdīdyādhve* (*dhve*?)¹⁾ in consequence of the augment *ju* being prefixed (VI 4 63), *it* no longer follows immediately on the stem. On this ground some grammarians maintain that *dh* is not allowed here. Others assume that *in* is, but *angāt* is not valid in 79, so that *i* stands after *y* (one of the speech-sounds of *in*!), and that the cerebral is required²⁾

Ohs. 44 — Böhtlingk and Bhattoji exclude *h* and the semi-vowels from 78 and 79³⁾. This hardly presents difficulties as far as 78 is concerned inasmuch as examples in *r* scarcely occur. Not so in 79. In *cakrdhve* and the like, the stem to which the ending (*dhve*) has been added, ends, indeed, in a vowel. In such examples as *luluvīdhve*, however, (quoted by Böhtlingk himself) *it* belongs to the *ārdhadhātuka* suffix (VII 2 35), whereas the stem (before the following vowel) ends in *v*⁴⁾ in the same way as that of *acyodhram* (which Böhtlingk rightly quotes under 78) in *o* and *e* g. that of *adugdhvam*⁵⁾ (III 1 45) in *g*. Otherwise *dh* would be "regular" in the last example (78) (*Ajanīdhvam*, too, conforms to 78, if the supposition in Ohs. 41 be right.)

II B 2 VIII 4 1 *Ra-sābhyām no nah samāna-pade* The *n* immediately after *r* [*r*, short and long] or *s* in the same *pada*, is cerebralized

Examples. *Varna-*, *usna-*, *tisrnām*, *mātrnām*.

Ohs. 45 — That Pāṇini also includes *r vocalis* (short and long) (in which *r* is contained!) under *r*⁶⁾, appears from several examples. One may "hineininterpretieren"

¹⁾ Kūṣ on VIII 3 79, *MBh* *ibid* on *Vārt* 4, Vol III p 445, I 2. ²⁾ Kūṣ on VIII 3 79 *Ke-cid āhuh in-antāṅgād uttarasya ita Snantaryam yuṣā vyavahātam ita na bhavīṣyām dhatveneti Aporeṣūm darganam angād ita nivṛtīṣām ita ity anuvartate, itaṣ ca ya kārād eva itah paro 'nantarom id iti pakṣe bhavīṣyām mūrddhanyeneti*. ³⁾ For *lun* (79) cf. however, Whitney *loc cit* the grammarians give rules by which the lingual *dā* is optional only, and that after *i*, preceded by *y*, *r*, *l*, *v*, *h*, and Renou, *Grammaire*, § 10 *La cérébralisation*. [est] facultative s'il s'agit d'un aor en *ī* et qu'en outre la consonne précédente est une semivoyelle ou un *h*. Evidently both accept the complete *in* in both sūtras. ⁴⁾ I 1 57 does not apply here! ⁵⁾ Aorist! ⁶⁾ Cf. Kūṣ on the sūtra, *MBh* *ibid.*, *Vārt* 1, Vol III, p 452

this vowel on the ground of a comparison with VIII 2 18, in which the genitive *ro* comprises *r* as well as *r̄*. From this it follows that VIII 4 26 (*nr-manāh*) is an extension of VIII 4 3 (*samyñā*), but that VIII 4 39 must be regarded as an exception partly to VIII 4 1 seqq (*trpnoti*), partly to VIII 4 26 (*nr namana*)

Asiddhatva This substitution is *asiddha* in regard to any sūtra in which *n* is regarded as *n* (comp VIII 3 55 above) Thus from *V ūrnun̄* (*DhP* II 30 wrongly gives *n*) **ūrnunāva* (> *ūrnunāva*) is constructed according to VI 1 3, in *kurvanti m* is *pūrva-vipratishedhena* substituted (> *n*, VIII 4 58) according to VIII 3 24, not *n* according to VIII 4 2, in the same way *aksamat* gets zero according to VIII 2 7, not *n* according to VIII 4 2 (afterwards *aksamat* > *aksanvat*, VIII 2 9, 16, and this finally becomes > *aksanvat*, VIII 4 2) (This *aksanvat* (having eyes) must not be confounded with *aksanvat* (not injuring) from *V ksan* (*DhP* VIII 3, with cerebral *n*))

Secondary *asiddhatva* appears from the relation to e.g. VIII 3 99 (*harisenah* and the like with *s* on account of which *n* passes to *ṇ*, VIII 4 2)

Position-group C (General samdhi)

II C is VIII 4 40 *S-toh ṣ cuna ṣ cūh* *S*, dental mute and nasal are palatalized by a contiguous *ṣ*, palatal mute or nasal

Obs. 46—Although by its form the sūtra is like a *yatha samkhya* construction (I 3 10), it is evidently not conceived of as such

Examples — 1 *Vrkṣaṣ cete* (*s* > *R* > *h* > *s* > *ṣ*), *bhrasj* + *ṣap* (III 1 68) + *ti* > *bhrjgati* > *bhrjyati*, VIII 4 53) 2 *Tad ṣrutvā* > *taṣ ṣrutvā* > *taṣ ṣrutvā*, VIII 4 25) (optionally *taṣ chrutvā*, 63), *gamati* > *gachati* (VII 3 77) > *gatchati* (VI 1 73) > *gacchati* (VIII 4 40) 3 *Bhavān cete* either remains and becomes > *-ñṣ* (VIII 4 40), or becomes > *-ntṣ* > (VIII 3 31) > *-ñṣ* (VIII 4 40 twice) (optionally > *-ñṣch* (VIII 4 63) (optionally > *-ñṣch* (65))) 4 *Yaj + nan* (III 3 90) > *yajna-* > *yajña-* (comp the following Obs)

Asiddhatva. *Gacchati* and the like (VIII 4 40) are not further affected by VIII 2 30 (*asiddhatva* (1)) According to the same sūtra (VIII 2 30), and to 36 *yuj + ta* and *rāj + tra* become > **yugta* and **raṣtra* respectively, not

-je according to the present sūtra (*pūrva vipratishedha* in in either case)

VIII 4 40 is secondarily *asiddha* in regard to all such sūtras as according to which *s* or *tu* consonants arise which are palatalized by the present sūtra (VIII 3 34 and the like)

Obs 47 — It is clear that in consequence of the said *asiddhatva* of VIII 4 40 in regard to 2 30, in the position after palatals only *n* is palatalized, not also *s* or dental mute (= *jhal* consonants¹⁾)

Obs 48 — \sqrt{utch} gets *tuk* according to VI 1 73 ($\triangleright utch$) The root of the desiderative consists of *utch* + *it* + *sa* After the reduplication according to VI 1 2 (cf VII 4 60) the form *utitchisa* would arise, which would become $\triangleright uticchisa$ according to VIII 3 59 and 4 40 The right form, however, is *uticchisa* ¹⁾ Obviously the reduplication takes place after *t* has become $\triangleright c$ according to VIII 4 40 and this sūtra must, therefore be regarded as *siddha* in regard to VI 1 2

II C 1b VIII 4 45 *Yaro 'nunasike 'nunasiko va* For a media at the end of a *pada* the corresponding nasal may be substituted, if a nasal follows

Obs 49 — *Yar* instead of *jaç* (cf VIII 2 39) with a view to the following sūtras

Examples — 1 *Sasnam* (VII 1 55) \triangleright *sadnam* (VIII 2 39) \triangleright *sadnam* (VIII 4 41, 42) (optionally) \triangleright *sannam* 2 *Agnicid* (or *-n*) *nayati*

Obs 50 — At the end of a stem *pada* this assimilation is imperative in the speech of everyday life ²⁾ (*tan matra* I 4 17, V 2 37) It seems also usual in *sas* (*sad*) as the first component of a compound ³⁾

Asiddhatva in regard to VIII 3 23 appears from constructions such as *tristhum nayati* (not *m* or *n* according to the sūtra mentioned and VIII 4 59)

Obs 51 — In formations such as *nisanna* (*s* according to VIII 3 66) *irnaa* (\sqrt{ird}) and the like, in which first the first *n* has been cerebralized according to VIII 4 2 (1), and afterwards the second according to 41, the assimilation is due to VIII 2 42 (inlaut¹⁾)

¹⁾ *SdhK* on VII 2 74, Vol II, Part I, p 535 No 2626
Vārti 1, Vol III p 464

²⁾ *MBh* on VIII 4 45,
³⁾ Renou, *Grammaire*, § 33

II C 2 VIII 4 46 *Ātō ra hābhyam dūe* Any consonant (except *h*) after a postvocalic *r* or *h* may be geminated

Examples — *Urkk* (*V ūry*), *brahmman*

Asiddhatva in regard to VIII 2 30 appears from the first example

II C 1c VIII 4 53 *Jhālam jaṣ jhaṣ* For mutes, sibilants and *h* the corresponding mediae are substituted, if a media or media aspirata follows

Examples — (CI I 1 50) (Mute) 1 *Amugdhvam* and *mumugdhi*, Vedic forms, root aorist and imper perf from *V muc* ($g < k < c$, VIII 2 30) 2 *Buddhi* (*budh* + *ktm* (III 3 94) > *buddhi-* (VIII 2 40) > *buddhi-*), so part perf pass such as *labdha*) (Sibilant) 1 *Babhrāja* (*V bhrasj*, *sj* > *ej* (VIII 4 40) > *j* (53)) 2 *Dviddhi* (< *dviśdhi*), so also with *ciṇddhi* (or *ciṇdhi*) from *V ciś* (*h*) 1 *Adugdha*, the change takes place via media aspirata 3rd sing aor *a* + *duh* + *sa* + *ta* > *aduhta* (VII 3 73) > *adughia* (VIII 2 32) > *adughdha* (40) > *adugdha* (4 53) 2 *Dhaddhvam* (VIII 2 37)

Obs 52 — As to the media, the sūtra, of course, only denotes that it is preserved **apbhīh* (suffix *kvip*, UnS II 58) > *atbhīh* (VII 4 48) > *adbhīh* (VIII 2 39) which remains

Asiddhatva appears, for instance, from the relation to VIII 2 37, with reference to which sūtra *adhugdhvam* is regarded as **adugdhvam*. The same example shows secondary *asiddhatva* in regard to VIII 2 32, *uddhi* (*V vaṣ*), *diḍiddhi*, (*V diṣ*) etc show the same relation to VIII 2 36 etc

Obs 53 — On the relation to VIII 4 46 comp § 14, group II C 1c

*VIII 4 56 *Vavasāne* In pausa for a media at the end of a *pada* the corresponding tenuis may be substituted

Obs 54 — Although *jhālam* is valid from 53, the present sūtra cannot refer to changes of sibilants (cf I 1 50, VIII 2 39, 66 seqq), *h* (cf VIII 2 31 seqq), aspirates (VIII 2 39) and tenues (VIII 2 39)

Examples — 1 Nom sing *vaṣ* (VI 1 67, 68) > *vak* (VIII 2 30) > *vag* (39) optionally > *vak* 2 *Çvalih* > *cvalih* (VIII 2 31) > *cvalid* (39) or *cvalit*

Asiddhatva with regard to 39 is conspicuous. In the case of inversion of the sūtras such forms as nom sing *dvit* could not exist in pausa

*VIII 4 57 *Ano 'pragrhyasyanunasikā* In pausa *a*, *i* and *u*, short, long or pluta (*i* and *u* only provided they are not *pragrhyā*) may be nasalized

Examples — The examples handed down, chiefly concern pluta vowels *manūṣm* (TS 7, 4, 20), *vindasīm* RV 10, 146, 1), but also (RV) *ghanenāṁ|ekas, sacām|udydn, vṛpanyāṁ|rtasya*¹⁾²⁾

Secondary *asiddhatva* with regard to VIII 3 19 implies that the vowels which come to stand at the end according to this sūtra may be affected by the nasalization according to the present sūtra

II C id VIII 4 58 *Anusvarasya jayī para savarnā* For medial *anusvara* before a mute (cf 59), the nasal which is homogeneous with the following consonant is substituted

Examples **Bodhami* (VIII 3 24) > *bodhami* *grāmīa* (VI 4 15, VIII 3 24) > *grānta*

Asiddhatva With reference to VIII 4 2 such formations as *kurvanti, karsanti* *grānta* are regarded as *kurvamīti* etc (VIII 3 24) In regard to this sūtra VIII 4 58 is, therefore, *asiddha*.

II C 16 VIII 4 63 *Ṣaṣ cho 'ti Ck* may be substituted for *c* following on a tenuis, provided a vowel, *y*, *i* or *r* follows

Obs 55 — In virtue of VIII 4 55 *jhay* (62) is confined to *cay*

Example *Ṣvaliṣṣete* or *chete* (VIII 2 31, 39 4 55, 63)

Asiddhatva (2) appears from the relation to such sūtras as VIII 3 28 (*prankṣete* or *chete*) and 31 (*bhavancṣete* or *chete*, cf VIII 4 40 above, p 94 3rd example)

II C 3 VIII 4 65 *Ḥharo jharī savarne* Postconsonantal mute or sibilant before homogeneous *jhar* consonant may be syncopated

Examples — 1 *Ad + ta* > *jagdḥ + ta* (II 4 36) > *jagdḥdha* (VIII 2 40) > *jagddha* (4 53) optionally > *jagdha* (65) 2 Loc pl *cikīrs + su* > *cikīrssu*, optionally *cikīrsu*

But *prīya pañcnaḥ*, as the second *ṇ*, although homogeneous with *c*, does not belong to the *jhar* consonants

1) Or *vṛpanyam|rtasya*? Cf Macdonell, § 70, 1b, Note 7 2) Nasalization after Macdonell § 66 a) 1 and 2 Wackernagel gives *m* in all examples (§ 259 b, *a* and *o*)

Asiddhatva (2) with regard to 61 appears from the (optional) syncope of *t* in formations such as *ut-thātum* (< *ut tithātum*)

II C 4 VIII 4 66 (67) *Udāttād anudāttasya svaritah. Nodāttasvaritodayam a-Gārgya-Kācya-Gālavānām.* After an *udātta* a *svarita* is substituted for an *anudātta*, provided no *udātta* or *svarita* follows (According to *Gārgya*, *Kācya* and *Gālava* also in the latter cases)

Examples — 1. *Gārgyah* (*ādyudātta* according to VI 1 197, suffix *yañ*, IV 1 105) > *Gārgyah*. 2. In *agnim* **ilē* the verb loses its accent according to VIII 1 28 (> *agnim ilē*), after the *udātta* of the end-syllable of *agnim* (III 1 3, suffix *ni* UnS IV 50, or according to PhS I 21i) the *i* of *ilē* gets *svarita* (with *eka-ṣrutī* of *e* according to I 2 39)

Asiddhatva Primary *asiddhatva* with regard to VI 1 158 appears from constructions such as (*idm*) *īcāndsah* (RV. 1, 129, 2) (*V* 14 + *śānac* (= *ānā*, VI 1 163) + *jas* (= *as*, III 1 4) + *asuk* (= *as*, VII 1 53), *d* + *a* > *ā* (VIII 2 5, VI 1 102), subsequently (*i* and) *a* (of *asuk*) get *svarita*, to which VI 1 158, according to which *sūtra* only one accent would be allowed to remain, no longer applies.

The *sūtra* is, further, secondary *asiddha* with regard to VIII 2 82 seqq

II C 5 VIII 4 68 *A a A samurta* is substituted for a *vivṛta*

Example — *Bodhanti* > *bodhṇti*

Asiddhatva The last *sūtra* is primarily *asiddha* with regard to any *sūtra* according to which *a* becomes long or *pluta* (VI 3 111, 115 seqq, VII 3 101 seq and the like, VIII 2 82 seqq), as *ṣ* is regarded as *a* (*vivṛta* like *ā*) in these *sūtras*. Were it otherwise, *sūtras* such as VIII 3 17, 4 57 (with supposed open *a*) would, as far as *a* is concerned, be meaningless

C ASIDDHATVA TACITLY IGNORED

If, in consequence of a substitution taught in the *Triṣṭupī*, an opportunity should arise for application of a previous *sūtra*, this *sūtra*, as has been established under B, will, as a rule, not take effect

Example — The vowel which becomes final in a *pada* according to VIII 3 19 is not contracted with the following

one (VI 1 87 seqq) The hiatus, therefore, is rightly secured by VIII 2 1.

It is, however, not absolutely impossible that certain processes should repeat themselves in the successive stages of Pāṇini's developments, as well as in the historical periods of dialects. To such possibilities these developments had to be adapted (cf p 71, Obs. 6)

This might be done by mentioning such processes anew in the *Triṣāḍi*

Examples.—See example in the Obs. just referred to N.B. Relations like those of VI 1 66 (syncope of *v* and *y* before a consonant except *y*) to VIII 3 22 (syncope of *y* as far as this has sprung from R (17) in external *saṃdhi*) are of a somewhat different nature.

The *asiddhatva* is explicitly restricted or denied by VIII 2 2 and 3

Examples — 1 For the *i* of *ball*, which becomes final according to VIII 2 7, the same holds good as for the *i* referred to in VI 1 77. 2 The rule for the instr. sing. of *ghī*-stems (I 4 7) in I—VIII 1 (VII 3 120) also applies to such *ghī* stems as originate according to a sūtra of the *Triṣāḍi* (VIII 2 80)

As a rule, however, Pāṇini, in ignoring the *asiddhatva*-principle, combines such processes with similar processes from I—VIII 1.

Examples — Thus the *u* < R (VIII 2 66) is affected by the contraction-rule VI 1 87 (cf 113, 114), the *ru* of the *Triṣāḍi* is, before *r*, syncopeated in the same way as the *r* of I—VIII 1 (*agni-ratha*-like *puna rakta* (VI 3 111) (*punar śaradīm*, no 4)), etc..

This method is likewise not unfrequently applied if a substitution in the *Triṣāḍi* gives rise to developments which unite themselves with sūtras from I—VIII 1

Examples — For this reason sūtras such as the following take their places in I—VIII 1 VI 1 176 (accentuation of *mat* (*taṣ*) on account of an augment which is taught in the *Triṣāḍi* (VIII 2 16), VI 3 111 (vowel-lengthening in consequence of the syncope of *dh* (VIII 3 13)), VI 3 112 (vowel alternation in consequence of the same syncope), VI 1 125, 129, 130 (contraction of pluta-vowels), and so on

Obs 56 — That processes from a later stage are referred to, is sometimes necessitated by the fact that Pāṇini's developments do not correspond with the historical growth of the forms. Thus *as* before *a*-becomes > *o*' already in I—VIII 1 (VI 1 113, 87, 109). At first, however, not *o*, but *a* arose, the *o* occurs later analogically, along with *abhinīhita-samdhi*¹⁾, evidently wherever the preceding *a* did not become *pluta*. Since in Pāṇini's developments *pluta*-lengthening only appears at a later period (VIII 2 82 seq.) he was obliged to anticipate it in VI 1 113.

In all these cases a substitution of the *Tripāḍī* is, in spite of VIII 2 1, referred to beforehand.

Such an anticipation is likewise met with in the *Tripāḍī* itself.

Example — The process of VIII 3 13, for instance, presupposes the operations according to VIII (2 40 and) 4 41, which cannot cause misunderstanding, as other formations than those which arise according to the sūtras just mentioned, which could conform to VIII 3 13, do not occur (neither in external *samdhi* (VIII 2 39) nor in internal *samdhi* (suffixes which begin with *dh* do not exist)).

Obs 57 — It also occurs that a sūtra, so to say, anticipates itself, when, namely, successive substitutions are performed in the same word. Thus *khalapvi* + *ācā* > *khalapvyācā* according to VIII 2 4, although in order that *khalapvi* may arise, the same sūtra must already have been applied. In *bhavāñc cete* the *t* (from VIII 3 31) becomes > *c* according to VIII 4 40, and subsequently *n* becomes > *ñ* likewise by VIII 4 40.

Now, the reader knows that all these anticipatory *ādeṣas* must needs have been taken from the *Tripāḍī*.

Obs 58 — For *e.g.* the *ru* of VI 1 113, 114 — as appears already from the name — must be the one from VIII 2 66 seqq., because it cannot possibly have another origin²⁾, the *n* (*nut*) in connexion with *vat* (*mat*) is nowhere dealt with except in VIII 2 16, the *dh* which is referred to in VI 3 111 cannot be different from the one in VIII 3 13, *pluta*-vowels are constructed in the *Tripāḍī* only, the

¹⁾ Wackernagel, *Altindische Grammatik*, § 285, b ²⁾ Cf. *Kāc* on VI 1 113. *Rutvam asyācrayatvāi, pūrvastrāśiddham ity āśiddham na bhavati*, Bhatṭojī Vol I, p. 82, no. 163, because this sūtra specifically mentions the word *ru* and then ordains *n* in its stead.

scarita of the *i* of loc sing *khalapī* as well as the one of *ā* in *āśā*, must evolve according to VIII 2 4 (*khalapī* (*antodatta* acc to VI 2 139) + *i* > *khalapī* VI 4 83)¹⁾ And so on (cf p 99)

Since the substitutions referred to cannot possibly be others than those taught in the *Triṣṭupī*, *i* *e* since the ignoring of VIII 2 1 is evident, there was nothing that should prevent Pāṇini from putting such sūtras in a place they were logically entitled to. He was allowed, nay, induced to sacrifice the *asiddhatva* principle to the logical one.

Obs 59 — For the process according to which *u* (< *R*) coalesces with the preceding vowel, fits in best in the vowel contraction *prakarana*, the lengthening of vowels on account of such syncope phenomena as are taught by VIII 3 13, 14, bears on the same matter as is treated of in VI 3 111 seqq (*dirghah*¹⁾), etc.

Obs 60 — Some cases which might show an apparent neglect of the *asiddhatva*, are readily put up with. Thus the reader himself decides — the simultaneous mentioning of *dā* and *r* (*ru*) in both passages already points to it — that *r* in VI 3 111 also = *ru* of the *Triṣṭupī*, whether consistently or inconsistently he shall apply the optional rule VIII 2 33 to such constructions as **drohta* **drohtā* (VIII 1 4) — Some exceptional cases, which might perhaps be attributed to less great carefulness, are mentioned under B (see *e* g Obs 19 seq).

Obs 61 — For the same purpose as certain operations are performed beforehand some others are, theoretically wrongly, only ordained in the *Triṣṭupī*. Thus the lengthening of *i* and *u* before an "original" *r* belongs, as regards the subject matter, to I—VIII 1 (under VI 3 111 (*dirghah*)). As, however, practically, no difficulties would arise, this lengthening could be combined with the same lengthening of the same vowels before *R* < *s*. In **aśir* (with *R* < *s*, VIII 2 66) and **gir* (< *rs*, VI 1 68) therefore, the *i* is equally lengthened according to VIII 2 76.

Obs 62 — Not only logical considerations — the desire of putting together what belongs together substantially — need have led Pāṇini to account in advance

¹⁾ Cf *āśā* in VIII 2 4.

for such formations as referred to above. By comprising such more or less similar processes under one sūtra, an opportunity was, moreover, afforded for sparing a sūtra (mnemotechnical principle). Thus a sūtra according to which *AgnīR rathah* would become > *Agnī rathah* became superfluous by tacitly comprehending the syncope of *R* (VIII 3 14) already in VI 3 111. Instead of two entirely analogous sūtras with reference to the hiatus in the case of *pluta* vowels on the one side and *pragṛhya* vowels on the other, the first of which should have been reserved for the *Tripadī*, one sūtra VI 1 125 sufficed. Accordingly the common sentence-parts *acī* and *nīyam* were spared.

CHAPTER V. PARALLELISM OF THE LOGICAL AND THE ASIDDHATVA PRINCIPLE

I. PARALLELISM OF THE LOGICAL AND THE ASIDDHATVA PRINCIPLE IN THE PROGRESSIONS

§ 12.

For reasons stated above (§ 11A) several substitution-sūtras were neutralized. The forms arising by such sūtras subsequently develop in the same way as those in I—VIII 1 (see § 9.1). Unless a development be concluded as in VIII 2 18 (**kṛtsa* > *kṛtsa*, after which *l* remains), Pāṇini makes each of the processes by which the particular forms arise, a new main-process, whereupon, by continually applying the same method, he successively derives from the forms in question, as from new norms, all the other forms.

Example — The *s* of the ending instr. pl. *ḥas(asi)* becomes first universally > *ṣiṛu*. This *ru* is either preserved or it universally becomes > *ḥ*. The *tsarga* remains or becomes > *s*, and so on.

Accordingly, either one single substitution (*kṛtsa*) or — usually — the first of a progressive series of sūtras refers directly to one or more sūtras of I—VIII 1. The number of sūtras which, in the way just discussed, are destined for the *Triṣṭhi* need not be left to chance, but could be extended pretty arbitrarily by the manner of unifying, transferring and combining of forms. Pāṇini (in imitating Kātyāyana's *prāticakhyai*) has utilized these means to such an extent as would, in his opinion, enable him to simplify his *sūtra*.

The sūtras which for reasons indicated above (with a view to diminishing the undesired and increasing the desired agreements, or disagreements) were neutralized, form the starting-point of the *Triṣṭhi*. They might be called "opening-sūtras".

Obs. 1. — Since Pāṇini intends to construct first a set of ideal *śada*-forms (Formation-group I, see § 9B), it is clear that especially such processes as bear on speech-sounds at the end of a *śada*, should be put in VIII 2—4. As the *śamdh*-forms (VIII 3—4) are derived from the

forms of Formation-group I and those of I—VIII 1, it also follows that several sūtras which deal with internal *samdhī*, too, range themselves in the *Triṣṭupādi*, and especially in VIII 3—4

On account of their direct relation to sūtras from I—VIII 1, first of all, therefore, such important sūtras as VIII 2 7, 23, 37 and, among the accent sūtras, VIII 2 4—6 of different progressions beginning in I—VIII 1 had to be put under VIII 2 1

Obs 2 — Still other circumstances may lead to a sūtra being put in the *Triṣṭupādi*, thus the desirability of distinguishing *vat* which, as *matup*, is combined with *mat*, from the homonymous *vat* which occurs in I—VIII 1

Except a progression be concluded by a substitution which is *asiddha*, as after the change of *r* into *l* (VIII 2 18 seq.), each of the opening substitutions is continued by further substitutions in the *Triṣṭupādi*, possibly in joining other progressions with which it comes to share a stage. All these subsequent substitutions, therefore, are continuations either of an opening sūtra (which refers to a sūtra in I—VIII 1) or of a continuation thereof

Example — The "opening-sūtra" VIII 2 23, for instance, which itself is a continuation of *e g* VI 1 68, is continued by *e g* VIII 3 7 (in *samdhī*), which itself, as an opening-sūtra, continues sūtras such as VI 1 103 and is again continued by VIII 3 15, etc

Each sūtra which is a continuation of a *Triṣṭupādi*-sūtra (whether of an opening or of a continuation sūtra) must, on account of VIII 2 1, follow on the sūtra it continues (secondary *asiddhatva*, § 10B)

Examples — Sūtra VIII 2 66, for instance, must (for *samdhī*-processes) be followed by VIII 3 15, this sūtra by 3 34 seqq etc, sūtra VIII 3 31 must follow on 2 23 (which happens to be partly debarred by it) (*bhavān śete* > *bhavānt śete*), sūtra VIII 4 40 again on 3 31 (> *ñc-ṣ*) the optional sūtra 4 63 on 40 (> *ñc-ṣh*) etc

Obs 3 — Forms which are to be excluded from a sūtra have to arise by later sūtras in another progression, and become primarily *asiddha* (comp *e g* the relation between VIII 2 4 and 108)

Since these continuation sūtras must follow on sūtras which fall under VIII 2 1 themselves, they, too, take their places in the *Triṣṭupādi*, which they gradually fill up

It needs hardly to be observed that this mutual order of the sūtras of one and the same progression, which is required by the said secondary *asiddhatva* agrees entirely with the one suggested by the logical principle (continuation')

The different forms or groups of forms which arise after each substitution, go their own ways. In thus ramifying, each progression brings forth several offshoots. New sets of rules (progressions) arise if such sub progressions get a stage in common with other progressions or offshoots thereof

Obs 4. — Where such a coincidence is attended with a local succession, a concatenation will be formed

Thereupon new ramifications take place, etc

Examples — 1 With regard to the development of the part perf pass of *V trd VIII 2 42* (**trdia > *trnna*) is continued in two progressions. In VIII 4 1 the cerebralization falls together with that of any other *n* which is preceded by *r*, in VIII 4 41 the cerebralization of the second *n* with that of any other *n* in inlaut position after a cerebral 2. Sūtra VIII 2 66 is a continuation of *e g* IV 1 2 (cf (nom sing in) *su*, in so far as this suffix has not been apocopated by VI 1 68, 69, *jas fas*, in so far as they have not been changed by VII 1 20 and the like, *bhis* (also where it has been replaced by *ais* according to VII 1 9)), further also of III 4 78, 82 (forms in *s*, in so far as *s* has not been dropped by III 4 98 seq, VI 1 68 and the like. Several progressions appear to come together here (in VIII 2 66), and give rise to a new progression which begins with forms in *R* and which, in combination with forms in *r* (in so far as these remain after the substitution according to VIII 3 14), is divided (by VIII 3 15) in a progression with retained *R(r)*, and another with *h*. This *h*-progression is resolved into different sub progressions by VIII 3 34 seq., and so on.

Now, the order of the places (the sūtras) in which the progressions begin or end, or sub progressions detach themselves or join other progressions or sub progressions, or end, has to meet all the requirements of the primary and secondary *asiddhatva* mentioned above

Obs. 5 — Thus in the progression a^1, a^2 . . the intervening spaces have to be chosen in such a way as to admit of the progression δ^1, δ^2 being put in its proper

sequence, while, moreover, *e.g.* b^3 , which has to be neutralized in regard to *e.g.* a^4 , has to be ranged after a^1 .

Obs 6 — It will be clear now that the opening-sūtras of the different progressions could not occupy in succession the first places in the *Tripādi*, and that their number would be rather limited, lest not all the local relations to other sūtras should be accounted for. The principal thing, therefore, was to choose these opening-sūtras to best advantage, so that their number and consequently the benefit, as stated in § II A might increase as much as possible.

Thus the further external form of the *Tripādi*, even more than on the initial sūtras, depends on the manner in which the progressions of continuation sūtras are interwoven.

In Formation-group I, containing chiefly such opening sūtras as continue stages of the most different progressions from I—VIII 1, a rational arrangement of the sūtras will not forthwith result, particularly not so, as primary *asiddhata* is not at all excluded here.

In the complex of progressions of substitutions in Formation-group II, however, according to which the final forms evolve, the secondary *asiddhata* principle, which prevails in the *Tripādi*, runs parallel with the logical one within each separate progression, as has been stated above. This parallelism remains when progressions which show points of contact, meet, for the common phase in each particular progression is logically the continuation of the preceding stage.

Obs 7 — Thus by VIII 3 15 h is substituted for r which becomes final according to VIII 2 23 (24) (*pitur*), as well as for final R of VIII 2 66 (*agnir*). In accordance with the said double principle, VIII 3 15 follows on the two other sūtras — The preceding phase may also arise according to a sūtra from I—VIII 1, thus (**abhinads* (2nd sing imperf *V bhid*) >) *abhinad* (VI 1 68) (optionally) becomes > *abhināR* (VIII 2 75), *tiras* (I 1 37, II 4 82) becomes > *tiraR* (VIII 2 66), etc.

Owing to this circumstance the sūtras could chiefly be arranged logically.

How far, in further agreement with the logical principle, the *asiddhata* principle also allows of a logical order of the groups, will be examined in the following section.

I PARALLELISM OF THE LOGICAL AND THE ASIDDHATVA PRINCIPLE IN THE ARRANGING OF THE GROUPS

§ 13

Asiddhatva within the boundaries of the groups indicated above (§ 9) does occasionally occur

Example — In the *matup* group (I (3)) VIII 2 16 is *asiddha* in regard to 9 owing to which *asiddhatva akramat* (VIII 2 7) becomes (not **aksa vmat* (VIII 2 9 cf I 1 54) but) > **aksa vat* according to the first mentioned sūtras

As a rule however two sūtras one of which is *asiddha* in regard to the other belong to different groups. Lest the *asiddhatva* counteract a rational grouping (main groups and thematical subgroups) : *ε* lest either the *asiddhatva* or the possibility of proper grouping be disturbed each particular group should follow on another group even if only a single sūtra of the latter on account of VIII 2 1 must precede a single sūtra of the former. Hence it may occur that other sūtras of the one and other sūtras of the other group are not constructively connected at all.

Example — Thus group VIII 3 55 end of the *pudā* (cerebralization of *s*) should precede group VIII 4 1—39 (cerebralization of *n*) on account of *ε g* the relation between VIII 3 59 and VIII 4 1 (the *s* arising from the first sūtra has to produce effect in the second) but *ε g* VIII 3 59 has nothing to do with *ε g* VIII 4 14.

That the said requirements of the *asiddhatva* principle do not exclude the logical building up of the *Tripadī* but rather that they are attended with it may be proved as follows.

The progressions of which the *Tripadī* is composed (§ 12) either develop side by side (or partly overlap one another) in beginning and ending in different places or they show points of contact in which they are entirely or partly combined to new progressions which may in their turn become connected with other progressions.

Example — The *s* group (VIII 3 55—119) treats of the change of *s* to *s* under certain circumstances. Afterwards these new forms are partly *ε* so far as *n* follows (directly or indirectly VIII 4 1—3), combined with forms in which under the same circumstances *n* follows on *r*.

regard to the sequence of the groups had therefore to be met fairly often here, was the less inconvenient as a logical arrangement of such divergent groups would, in itself, hardly be possible

Obs. 1. — Group VIII 2 23 seq., for instance, might precede as well as follow VIII 2 7 seq. From a rational point of view, neither of the two arrangements is preferable to the other. The *asiddhatva* of VIII 2 23 in regard to 7, however, requires 23 to be preceded by 7 (which moreover, consequently approaches 2)

The arrangement of the following (*samhitā*-) groups, however, (in Formation group II) mainly shows the aspect which has been described above. Logical continuation is regularly attended with secondary *asiddhatva*

Obs. 2. — *Agnis* > -R (VIII 2 66) > -h (3 15) > -s, (4 41), herewith the order of the groups of which these substitutions form a part, has been given.

In the same way as sūtras arrange themselves to groups, the groups again aggregate to higher groups

Obs. 3. — The final speech-sounds of Formation-group I are, as it were, the common *sthānam* of the substitutions in Formation-group II, Position group A. In the system of forms, thus arising, all medial consonants are submitted to the processes of group B, and finally, all the sounds then extant, to the general *samdhī* rules of group C

The three Position-groups, however, combine to one whole in distinction from Formation-group I. Whereas in the latter group a provisionally universal final speech-sound is constructed irrespective of the initial sound of the following word (which has, nevertheless, been taken into account beforehand), in the three Position-groups the following speech sound, sometimes the preceding one, is constantly kept in view. In Position-group IIA these forms (from Formation group I and I—VIII 1) are transformed accordingly. Afterwards in IIA the medial consonants are replaced by others in such a way as to admit of common general *samdhī*-rules being formulated (in IIC) for them as well as for the changed finals

Here, too, continuation is apparent. That it is attended with secondary *asiddhatva* needs no further demonstration

Obs. 4. — That primary *asiddhatva* is by no means excluded here, has been stated above (Obs. 1). The

remaining liberty allows of the mnemotechnical principle being applied fairly frequently. Where this principle comes into conflict with the logical one, either a compromise is made or the first principle, in breaking up the logical grouping, gains the victory. A clear example of the latter offers the treatment of the *samāsas* (in I—VIII 1, II 1 5 — 2 29) whereby certain *tatpuruṣas* as *bahuvrīhis* are included in the *pūrvā* class (see Liebhich, *Zwei Kap.*, p. IX and cf. also § 5).

The groups are the logical units from which, rather than from the single *sūtras*, the *Tripādī* is finally built up. As appears from the foregoing, a logically arranged system of progressions must reflect itself in a system of logically arranged thematical head and sub groups.

Obs. 5 — It goes without saying, in elaborating his system Pāṇini did not, for the sake of brevity, have in view a continual combining and dividing of progressions, which happily resulted in the said grouping, on the contrary, with a view to bring about a certain grouping he constructed, by continually substituting, his progressions in such a way as to arrive at the desired grouping. In this way — given the *pūrvatrasiddham* — a secondary *asiddhanta* could not but arise, it is true, but issuing from the progressive method of substitution it could not collide with it. The different phases of the different progressions are now brought in such a mutual relation that, under the regime of VIII 2 1, the groups develop in the desired way.

That intricate situations would occasionally arise, has been sufficiently proved by the above calculations, which do not in the least lay claim to answer to actual considerations of Pāṇini's, but only draw the attention to consequences he was faced with.

CHAPTER VI SYSTEMATICAL UPBUILDING OF THE TRIPĀDĪ

The *Triṣṭupādi* as a whole General view

An introductory survey of the *Triṣṭupādi* as a whole, may be of use in endeavouring to "follow" Pāṇini in the following pages. A short recapitulation of chapter III can serve as such.

a) Contents of the *Triṣṭupādi* (restoration of vowels and consonants) (§ 8, B)

Vocalism

The vowel-samdhī could almost entirely be achieved in I—VIII 1 and so the remaining cases occupy a subordinate place in the *Triṣṭupādi*.

Consonantism

Owing to the fact that by the normalization of the flexion one consonant has been levelled out (§ 3 A) which, notably in auslaut-position differs considerably from the one the external and, often enough, the internal samdhī points to, the consonant-samdhī, however, did scarcely allow of being treated in I—VIII 1.

Example — For an example see p. 55, Obs. 4. According as the forms pass the successive intermediate stages, *i.e.* according as Pāṇini approaches the end of his work, his formulas will become less divergent from those constructed by modern linguistics¹.

The consonant-samdhī, therefore, was for the greater part reserved for the *Triṣṭupādi*, and these "consonant-sūtras" prevail in it.

b) Grouping of the subject matter (§ 9 B)

Formation groups As the external samdhī of consonants has hardly been dealt with in I—VIII 1, first a group of processes (Formation group I) is taken up according to which the *padas* at the end undergo a transformation before they are adapted to serve as standard-forms from which finally (Formation group II) the definite samdhī (and pausa) forms are derived.

Obs. 1. — Pāṇini opposes the *samhitā* (= samdhī) form to the *avasāna*-form. The distinction in- and external samdhī is not made by him.

Obs. 2. — In Formation-group I the new illusory form may also be the *padapāṭha*-form, yet it needs not necessarily to be so. The idea is to construct (in I) a set of *padas* from which by simple sūtras IIa the *arāsāna*- and IIb the *saṁdhi*-forms can be derived. The possibility of deriving both forms from a common ground-form, was afforded by the circumstance that the *auslaut* forms are, indeed, very often based on *pausa* forms ¹⁾

Position groups In § 9 it has been stated that within Formation-group II three Position-groups must be distinguished the processes of which bear, on the whole, on the *auslaut* only, on the (an- and) *inlaut* only, and on any position in a *pada* respectively.

Sub-groups In the same section the thematical sub-groups of the said higher groups have been indicated.

The growth of some of the first sub-groups of the *Tripādi* as summed up in § 9 B, cannot be accounted for here since they arise by the coming together of such progressions as are rooted in I—VIII, 1. Hence it remains to be examined in what way the sūtras of those progressions which have their origin or are continued in the *Tripādi*, group together to sub- and main-groups the arrangement of which remains consistent with VIII 2 1, and what their mutual relation is.

According as Pāṇini appears to succeed in rationally grouping and arranging the matter of the *Tripādi* in observing the *asiddhantra* and the mnemonic principle, the system of the *Tripādi* should be judged.

Obs. 3 — It needs hardly to be observed again (cf § 13, Obs. 5, end) that the investigations which have to be taken up now, cannot have more pretension than to show how the development of the *Tripādi* may be conceived.

I SUB-GROUPS

§ 14

A FORMATION-GROUP I THE ABSTRACT PADA (VIII 2 4—107)

In the preparatory Formation group I sūtras VIII 2 7—75 bear on consonants (*hal*-division), 112. 7—22 on *yam*-, 23—75 on *jhal* consonants.

¹⁾ Cf., for instance, Wackernagel, *Altindische Grammatik*, §§ 263 and 275.

The anlaut is only once referred to (gr (8)), hence the substitutions concern the in and the auslaut, in the majority of cases the latter. Wherever this is possible, or rather desirable, both positions are combined (comp VIII 2 29 seqq and the like). A few processes bear upon the inlaut only (VIII 2 42 seqq.)

Obs 1 — In consequence of the same fact as by which IIa and IIb did (to some extent) agree (p 112, Obs 2), in and auslaut do not. The medial consonants, therefore, had to be prepared more on the "regular" samdhi, the final consonants on their "anomalies". The latter was the more difficult as these consonants had in a high degree preserved their stencilled ground form (§ 3 A). The position at the end of a word had, moreover, to be placed on a level with that at the end of certain word stems with a view to which the term *pada* is introduced (§ 7 B).

Of the vowel sūtras (*ac*-division) which are in a minority, three groups are put together at the end, whereas one group, for logical purposes, precedes the consonant-sūtras.

As regards the nature of the speech sounds, Formation group I may, therefore, be divided into the following parts:

1. <i>Ac</i> -division 1	VIII 2 4—6
2. <i>Hal</i> -division	
<i>a</i> <i>Yam</i> groups	7—22
<i>b</i> <i>jhal</i> -groups	23—75
3. <i>Ac</i> -division 2	76—107

Formation group I develops as follows ¹⁾

1 — *Ac* division 1 (VIII 2 4—6)

Group 1 Accent of coalescing vowels (VIII 2 4—6)

(1) (VIII 2 4—6) According to the nature of the subject matter (accentuation¹⁾) the processes of group 1 associate themselves with those of the preceding *adhyaya*. The formations in which the operations are performed, have already arisen by the samdhi rules in I—VIII 1, and it is clear, therefore, that, as regards the accentuation, these formations are dealt with first.

Obs 2 — Of the two other accent sūtra groups the sūtras of the first group (VIII 2 82—107) mainly bear on

¹⁾ The bold type numbers of the groups and at the head of the separate divisions refer to the groups in § 9, p. 61 seq. (those in parentheses designate groups that either bear on the inlaut as well, or concern exclusively this position)

the accentuation of such vowels as are construed by the same sūtras, those of the latter (VIII 4 67, 68) on the svantating of vowels on such conditions as are partly determined by the processes of the two groups just mentioned

Contents and mnemotechnics All three sūtras treat of the accentuation as a result of the meeting of vowels. So far they belong together. According to the first sūtra, the former of two vowels is reduced to a semi vowel, according to the two others, the two vowels coalesce, and form one long vowel. As regards the construction, sūtras 5 and 6 are, therefore, independent of 4, and an inverted order (5—6 before 4) would not be incompatible with the *asiddhatva* principle. Likewise 5 and 6 might be interchanged, as their mutual relation (*utsarga* (optional) *apatada*) does not require a particular order. Apparently the arrangement of the three sūtras is entirely determined by mnemotechnical considerations. *Anuvṛtti* (in 5) of *anudattasya* (from 4), of the same term and also of *ekadeśa udattena* (in 6) (from 5)

Sūtras 4 and 5 are universally valid, 6 (with the loc. abs. *anudātte padāḍau*) refers to external *samdhā* only

Asiddhatva On the motive for putting VIII 2 5, and therefore (§ 13) the whole group 1, in the *Tripādi* see p 34 on VIII 2 5

2 — *Hal* division (VIII 2 7—75)

a — *Yam* groups (VIII 2 7—22)

Gr 2 Syneopation of *n* at the end of a *pada* (VIII 2 7, 8, 16, 17)

Gr (3) *Ṣ* (of *matuṣ*) becomes *u* (VIII 2 9—16)

Gr (4) Alternation *r-l* (*r-l*) (VIII 2 18—22)

2 (VIII 2 7, 8, 16, 17) It must have struck Pāṇini that, also in his system, consonants which, by the loss of one or more consonants following them, come to stand at the end of a *pada*, are generally treated in the same way as those consonants which occupy this place from the outset

Example — Thus the *s* of *detas* (IV 1 2) and that of 2nd sing *acalās* (VI 1 68) are submitted to the same processes (VIII 2 66, 3 15 and so on (cf. however 2 74)

That *n* behaves differently he could not fail to observe.

Example — In **rājanbhuk* the *n* is syncopated (VIII 2 7), in *bhavān* (VIII 2 23) it is not

He therefore rightly assigns the syncope of *n* in **rajanbhuk*, and the like, to an earlier stage by awarding the first place in the *hal* group to the apocope of *n* at the end of a *pratipadika* which is likewise *pada*

Contents Sūtra 7 is the main rule, the three others are *aparādas*, 16 and 17 only so far as some *n*'s which had been dropped according to 7, are restored again

Asiddhatva The *asiddhatva* of VIII 2 7 has already often been discussed (see, for instance, § 11, p 75)

Obs 3 — *Asiddhatva* of VIII 2 7 also in regard to 4 would involve that after such forms as *n s bālī* (i according to VI 4 13) a vowel could not take *ksapra-svarita*. See VIII 2 2

(3) and (4) (VIII 2 9—16, 18—22) With the processes of the preceding group the substitutions by which the uniformity of the other nasals and liquids ceases, associate themselves. Thus groups (3) and (4) arise

Contents and mnemotechnics The *matup* group (group (3)) has been incorporated in group 2. It takes its place before the exceptions (16, 17), the bridge is formed by 16, which belongs to both groups (*anuvṛtti* of *chandasi* in 16 and 17 (taken from 15) and of *nut* in 17 (from 16)). That 17 could not but follow on 16, to which it is quite analogous, goes without saying.

The changes in group (4) regard both consonants (*r*, *l*) and vowels (*r*, *l*), for the greater part the former, and these sūtras could, therefore, best be embodied in the *hal* group. Sūtras 22 and 19 thematically belong together, but are separated with a view to the *anuvṛtti* of *vibhasā* in 22 (from 21).

Note The remaining nasals are, along with some other speech sounds as a *prasangika* group, appended to group 13 (see p 126).

Asiddhatva As the substitution according to VIII 2 16 is *asiddha* in regard to that of 9 (see p 76) and as, further, sūtra 16 belongs (to the syncope group 2 as well as) to the *matup* group, the latter could not but follow.

The fourth group seems not to be bound to a fixed place among the *yam* groups

b. — *Jhal*-groups (VIII 2 23—75)

- Gr. 5. Simplification of final consonant-groups (VIII 2 23, 24, 29).
 Gr. (6) Syncopation of medial *s* (VIII 2 25—29).
 Gr. (7) Development of palatals and *h* (VIII 2 29—36 (37—41, 62, 63, 67).
 Gr. (8). Media at the beginning of a root-syllable becomes media aspirata (VIII 2 37, 38).
 Gr. 9. Sonantizing and deaspiration of *jhal*-consonants at the end of a *pada* (VIII 2 39).
 Gr. (10). Metaleptical assimilation of voice (VIII 2 40).
 Gr. (11). *Ṣ* and *dh*, before *s* become *k* (VIII 2 41).
 Gr. (12) Alternation *ta-na* in participles and participle-like formations (VIII 2 42—61).
 Gr. 13 Final consonant before *kṛm* becomes guttural (VIII 2 62)
 * Final consonant of *naç* becomes *k* or *ṣ* (VIII 2 63).
 * *M* final in a root becomes *n* (VIII 2 64, 65)
 Gr. 14 *S* (sometimes other consonant) at the end of a *pada* becomes *ru* (*r*, *d*) (VIII 2 66—75).

§ an (6) (VIII 2 23, 24, 29, 25—28, 29) In consequence of VIII 2 23 seq and 29 (group 5), henceforth all those consonants which have come to stand at the end of a *pada* by the loss of one or more consonants behind them, are put on a level with the final consonants which originate from I—VIII 1.

Obs. 4 — A few final consonant-groups have already been simplified before (VI 1 68, 4 21 **rājān*, *mūr* etc.).

With the last sūtra of this group, which ordains the universal apocope of *s* after a consonant, the processes bearing on the syncope of medial *s* (gr. (6)) associate themselves.

Contents and mnemotechnics. The principal rule for the shortening of final consonant-groups is given in 23 (**bharāt* > *bharān*, 3rd s. aor *achānds(i)* (*V chand*) > *achān*. It is followed by a restriction (24 (*catur* V 4 18, but) *urk* (*urkk*, VIII 4 46) (III 2 177, VI 1 67, 68, VIII 2 30 (4 56¹)) and an exception (29: *kn̐tataṣ*, *kāṣṭhataṣ*, (*V takṣ*) and the like (VIII 2 29, 39, 4 56)). As to the junction of groups 5 and (6) the same method has been followed as in the case of 2 and (3). Owing to the rules for syncope of *s* in the given order being put after 24, and the groups 5 and (6) falling together in 29, *anuvṛtti* not only of *sasya* (*loṣaḥ*) in

25 (from 24), but also of *jkaly ante ca* (26 and 29) in the following group, became possible

Besides according to the position, the *s*-syncope- and the following group (7) overlap one another in 29, because by this sūtra along with *s* the same speech-sound (*k*) is elided that, along with other speech-sounds, occurs as *ādeṣa* in part of the sūtras of group (7) So far 29 forms a concatenation between groups 5 and (6) as well as between both these groups and group (7)

Asiddhatva. *Asiddhatva* of group 5 in regard to group 1 (which had to be followed by groups 2 and 3'), appears from numerous examples 1 *Bhavān* (< *nt* < *nts*, VI 1 68) does not become > **bhavā* (VIII 2 7) 2. Thus *tādrç-v-s* (< *tad + drç + kum* (III 2 60) + *su*) > *tadrç* (VI 1 67, 68, 3 91) > (Ved) *tādrñç* (VII 1 83) > *tadrñ* (VIII 2 23) without further elision of *n* by VIII 2 7 (Afterwards *n* > *n*, VIII 2 62) 3 *Yunç-v-s* (III 2 59, VII 1 71) > *yun* (VIII 2 23), but this becomes (not > **yu* (by VIII 2 7), but) > *yun* (VIII 2 62)

Group (6) (inlaut¹) might as well have preceded group 5 Its place immediately after the latter group is due to mnemotechnical considerations (*anuvṛtti* of *sasya* from 24)

(7) (VIII 2 (29), 30—36) Most of the consonants (of two kinds, see under 2) at the end of a *pada* show the tendency of becoming (or remaining) voiced in *samdhī* (except before unvoiced consonants) and optionally also in *pausa*, and of losing aspiration To this principal rule (the *jaṭva-sūtra* VIII 2 39) all other processes are directly or indirectly conformed

Difficulties arose in the case of the palatals and *h*, these consonants being very frequent in Pāṇini's system, but in reality unknown in the said position

For the palatal mutes (which have been settled as norms) Pāṇini might have substituted partly velar mutes, partly cerebral mutes (spirants), whether before or after the principal rule

However, instead of cerebral mute (spirant), he regularly gives the spirant (*s*) (36), whereas for *h* — with a view to the following group and to group 9 — cerebral (guttural) media aspirata is substituted (31 seqq.),

Obs 5 — It is conspicuous that these aspirates represent Indic palatals and velars respectively¹

Thus he was enabled to combine all his remaining palatals and to comprehend their development in one general rule (*Coh kuh* VIII 2 30) which would hold for any position before consonants (except nasals and semi-vowels) both in in- and auslaut (the latter by further intervention of the principal rule)

Obs 6 — Such forms as *vākya* (with *k* which is not followed by a *jhal*-consonant) are accounted for elsewhere (VII 3 52 and the like) — Group (12) being neutralized, *i e* being put after group 7, *lagna* (*V lasj*, $g < j < sj$ 30, 29), *magna* (*V masj*) etc are explained by 29, *bhagna* (*V bhaj*) etc by 30

Obs 7 — By the restriction *jhal* (VIII 2 30), not *hal*, the palatal that has developed analogically before personal endings beginning with *m* (*vacm*, $e < k'$), and that of type *ucyate*, is prevented from changing according to VIII 2 30

Contents and mnemotechnics The *sthāninaḥ* in sūtras 30—36 are *c*, *ch*, *j*, *ś* and *h*, standing at the end of a *pāda* or before a *jhal* consonant

In these positions *c* and *j* alternate with *k* sounds, the palatal spirant, *ch*, and sometimes *j*, once also *c* with a cerebral, *h* with both of them, and so there was occasion for combining these sūtras in question into one group

Principal rules 1 $C(j) > k(g)$ (30), 2. $h > dh$ (31), 3 *ch* and $ś > s$ (36) Exceptions 1 *C* and *j* which do not become $> k(g)$, fall together for the present with *ch* and *ś* in *s* (36) As *V V* in *ñ* are wanting, and those in *jh* do not fall practically under 30, this sūtra simply runs *Coh kuh* 2 According to 32—35 $h > gh$, *dh* or *gh*, *dh*, and *th* respectively, 33 is, as regards *druk*, a restriction on 32, which would, thus, generally run *Dāder dhater ghah* The restriction *jhal* ante *ca* is valid in the whole group

Asiddhatva with regard to both the preceding groups appears, for instance, from the 3rd p s of aorists of *V V* in *c* By interchanging 29 (which, besides belonging to group 5, also forms part of group (6), see *supra*) with 30, the auslaut of the forms in question would become $> s$ instead of *k* (**aracst* (*V rīc*) would become $> arais$ (VI 1 68) $> arais$ (VIII 2 30, 29) instead of *arask* (23, 30), *aprāl* (*V prc*) would become $> aprās$, *amok* (*V muc*) $> amos$ etc)

Obs 8 — The palatals of 30 and the *h* of 32 represent

indeur. *k*, *k̐*, *g*, *g̐* and *gh*, *g̐h* respectively. As before back vowels, these consonants had remained velars in the positions mentioned. In Pāṇini's system, however, here, too, are the palatals resp. *h*, *ṣ*, *ṣ̐*, the consonants which have been levelled out in paradigms in which original velar alternated with secondary palatal at the end of the verbal root before a vowel, the "regular" ones. (According to Pāṇini, *pacāmi* not owing to, but as *pacasi* from *V pac*, *vacah* not owing to, but as *vacasah*, etc.¹⁾ So there existed the alternation palatal (*h*) — velar. In order to restore the real state of things, Pāṇini had, therefore, to formulate a process according to which palatal (*h*) reverted to velar. Hence *vāk* arises (not from **uok̐s* by apocope of *s*, but) from **vācs* by the same apocope and change of *c* to *k* afterwards (VI 1 68, VIII 2 30).

Obs 9. — Cases in which, whether regularly (as in *pākah*, *V pac*) or — as in the case of original palatals — on the analogy of velars (as in *bhrgu*, *jighisati*, *V bhraj* and *hu*, VII 3 53 and 56 respectively) Pāṇini's palatals and *h* interchange with velars in other positions than those mentioned in group 7, are accounted for by sūtras such as VII 3 52 seqq., in which the substitutions in question are usually connected by Pāṇini with the attendance of certain, for instance, *ghit*-suffixes (*pakah*, *V pac*, suff. *ghañ*) and VII 4 62 (reduplication). Cf also III 3 16, 41 seq and the like. — No substitutions in forms such as *vrka* (which stem Pāṇini derives from *V vr* with suff *kak*, *UnS* III 41)

Obs 10. — The aspirate of 32 (33) appears nowhere in the positions mentioned. Aspiration and voice are lost according to VIII 2 39, 4 53, 55, 56 in the cases concerned. The provisional substitution serves to submit *h*, as a *gh*, to the processes of 37, 40 and, theoretically, also to VIII 4 46, 47. Resulting forms according to VIII 2 39, 4 53, 55, 56

Obs 11. — The palatals of 36 (for *ch* = palatal, see Wackernagel¹⁾), and the *h* of 31 are indeur. *k̐*, *g̐* and *g̐h*. In Skr. 10 most of the forms ending in an original palatal (where only the guttural was "regular" before *s*¹⁾) as in those in *s* (as *dvīs*, nom. siog. *dvīṣ*, owing to *dvīdōhish*) the cerebral mute of the *dh*-casus had been generalized. Likewise before

¹⁾ Wackernagel, *Altindisch Grammatik*, § 131 seqq.

t this palatal had become cerebral. Hence Pāṇini could not fail to observe a frequent interchange palatal (*h*) — cerebral in his system. As he starts from the palatal (*h*), he had to introduce the reversion palatal (*h*) > cerebral. Thus according to Pāṇini, **marjti* (< -*kt*-) becomes > -*st* (VIII 2 36) (> *st*, 4 41), 3rd s aor. ānat (√ *naṣ*, *t* < *st* < *h(s)t*¹⁾) arises from **anaṣst* (VI 1 68, VIII 2 23, 36 etc), the same form as 2nd s (which should "regularly" have *k* (< *ks* < *ks*), but borrows the *t* from the 3rd s) arises from **anaṣs* according to the same sūtras — *Vraṣe* (in VIII 2 36) = *vraṣ* (DhP. VI 11), cf *mūlavrt* (VIII 2 29, 36 etc).

Obs 12 — On the aspirate *dh* (31) comp. Obs 10 (to the sūtras mentioned there, VIII 3 13 is to be added) — According to VIII 2 39 *s* < palatal *is*, together with original *s*, converted into *d* (*t*, 4 56), *t* *e* to the consonant which penetrated from the oblique *casus* into the nominative (unless it be accepted that the cerebral is the regular development (Wackernagel § 149, c) (before *jha*! consonant > *d* or *t* (VIII 4 53 55)) For the position before *s* see following Obs., group (11).

Obs 13 — Inasmuch as part of the *sthānaka* of the groups (6), (8)—14 are indeur. gutturals, these groups are connected with group (7).

Group (6), sūtra VIII 2 29. The historical development of some of the processes referred to, recalls 36. Thus in forms such as **ataksta*, *s* after original palatal had disappeared before the mute already in the parent language, *kt* became > *st* in prime Aryan and *st* > *st* in Skr (by *assimilatio reciproca*). The *t* of the nominative -*tat* (< *ks*) is due to the analogy of forms in which no sibilant follows or followed. In Pāṇini's system *k* is dropped by VIII 2 29 in either case and subsequently (39) *s* is converted into *d* in the latter case (*s* had been dropped before by VI 1 68).

The √ *bhrasj* and *masj* (DhP VI 4 and 122 respectively) also in the *Astadhyayi* rightly end in *sj* (*bhradga*, *madgu*²⁾) (with *g* < *j*, VII 3 53), cf VIII 4 53. The geminates in *bhrjyati*, *mamajja* etc and those in formations of √ *lasj* (DhP VI 10) arise according to VIII 4 40, 53, **sadhulaj* falls under 30 etc, **dhanabhry* under 36 etc.

¹⁾ Ibid., § 149a) 1)

²⁾ Cf Liebhich, Zur Einführung III, p. 33 UnS I 7

In *cakṣe* (*V cakṣ + se*) Pāṇini starts (not from a palatal, but) from *k* (*V cakṣ, DhP. II 7*) According to VIII 2 29 the *k* of the root is elided and subsequently *ṣ + s > kṣ* (41) (*> kṣ, VIII 3 59*)

Groups (8)–(10) See Obs 10 and 12

Group (11) As before *s* every guttural regularly becomes *> k* in Skt, the *dh* and *ṣ* which have been substituted in part of the cases (31 and 36, group (7)) required a reversion to *k* (VIII 2 41) Before *s* therefore, this *ṣ* (< palatal) falls together with original *ṣ* (*dveṣṣi, V dvīṣ*) (On the same combination also at the end, see Obs 12) According to VIII 3 57 *kṣ* also arises from velar *k* (*k'*) + *s*

Group (12) Part of the finals of the roots after which *t* of the participial *ta* becomes *> n*, are gutturals The provisional treatment of such participles as *ta* formations has served, therefore, to account for the guttural according to such universal rules as 29 and 30 are (*lagna, bhugna*) Likewise, therefore, those sūtras of group 12 by which the said restoration is effected, are closely connected with group ((6) and) (7)

Group 13 Cases in which, as an exception to the rule according to which the cerebral from the *bh* cases has been carried through — often¹⁾ under the influence of a preceding *r* — the regular guttural of the nominative sing and the locative pl has been generalized, are accounted for by VIII 2 62 (*dudbhūh > digbhūh* owing to *dikṣu* etc) — The words in question are kept apart from the other *kvi* formations by their being marked off as *kṛin*, instead of *kvip* formations, which was possible because *nīṭva* and *pīṭva* of the suffix do not involve discrepancies in other cases

13* In the case of *V naṣ* (63) also *t* nom s. *ṣṇanat* (with *kvip*) (by the side of *naḥ* (not on record) — Cf Ved aor (inj) *naḥ*²⁾ and (*a*)*nat* (VI 4 73) (Obs 11)

Group 14 To the sūtras treating of palatals (*ṣ*) finally belong VIII 2 67 according to which Pāṇini derives *ṣ* from *j* *h* and *ṣ*, and 72 (*anaduh*) In some of these words the consonant perhaps represents an original palatal³⁾

(8) (VIII 2 37, 38) One more process the transposition of aspiration (according to VIII 2 37) in the case of palatals and *h* (*t e*

¹⁾ Wackernagel, Altindische Grammatik I § 149a)2) ²⁾ Whitney, Roots, p 89 ³⁾ Wackernagel loc cit § 261 c and however, ibid., III §§ 135 b, 139aβ as 166a and 139 a)βββ

in forms in *dh*, *gh* now (31 seqq.) as well as other speech-sounds had to precede the principal rule, otherwise 37 would be deprived of some cases (by 39). Roots that begin and end with an aspirate mute, do not occur in Pāṇini's system, and Grassmann's law, therefore, could not be formulated in its usual form. From the occurrence of forms such as *bhoṣyati* side by side with *bodhats* (*V bhudh*, Pāṇinian form: *budh*!) Pāṇini could, however, conclude that the aspiration had been transferred from the auslaut to the anlaut.

Contents. Thus 37 becomes the principal rule which accounts for the cases in which, contrary to the above the loss of the aspiration of the auslaut is attended with its being retained in the anlaut (Gr. 9piξ). Sūtra 38 extends the said process to some forms that do not fall under 37 (*dhātī(h)ah*). (For *ti(h)* see gr. (10) and VIII 4 55)

Obs. 14. — Forms such as *dhaddhve* become "regular" formations which show the following development: *dadh + dhve* > *dhadh + dhve* (37) > *dhaddhve* (VIII 4 53) — Grassmann's law is also met with in VIII 4 54.

The *anurtti* in 38 is conspicuous.

Asiddhatva. Group (8) had to follow on group (7), otherwise — since, according to 32 (group (7)), *gh* had been substituted for *h* — *dh* in *godhuk* would not be accounted for (by 37). So also *adhugdham* (with syncope of *sa* according to VII 3 73, subsequently *h* becomes > *gh*, after which *t* becomes > *dh*, before which *gh* becomes > *g* (VIII 2 40, 4 53) At the end: *artha-bhut* (*V budh*).

9 (VIII 2 39) Only now the principal rule could be given, according to which, except for nasals and semi-vowels, for any consonant at the end of a *pada* the corresponding media is substituted.

Obs. 15. — In pausa as well as in sandhi the tenuis, too, occurs. The *jaṣṭva*-rule is, therefore, calculated upon the position before a word that begins with a vowel or voiced consonant. (Consequently the rules for consonants at the end of a *pada* yet to come, will have to bear on the position before voiceless consonants) In this respect, therefore, VIII 2 37 shows the same tendency as is generally observed in I—VIII 1 (cf. p. 55 Obs. 4).

Contents. Explosives and spirants at the end of a *pada* become > corresponding mediae.

Obs 16. — In positions where this media is not followed by a vowel or voiced consonant, it is submitted to further changes (VIII 4 55, 56) The tenues (*k, t, t*) that are ordained by the subsequent rules VIII 3 28, 31 before *car* (*ç*) are naturally not affected by VIII 2 39

Asiddhatva. The preparatory character of the preceding groups in regard to the principal rule involves that this rule itself becomes secondarily *asiddha* In the case of inversion, the media in **godugh* would remain, etc

(10) (VIII 2 40) As far as they are followed by *jhal*-consonants, the aspirates which have been constructed by VIII 2 31 seqq (those in the position *ante* lose the aspiration according to 39¹), could now be comprehended in the aspiration-rule VIII 2 40, which logically follows on the deaspiration of 39 Along with the other mediae aspiratae they occasion the general process *ḥhasas tathor dho* (*'dhah*)

Contents According to this sūtra media aspirata + *t* or *th* become for the present > two mediae aspiratae, the second consonant becoming voiced and, as regards *t* also aspirated (The former aspirate is deaspirated again by VIII 4 53)

Obs 17 — Later analogy formations, as deviations from "Bartholomae's law" (*dhatte*, *adhattam*, etc, *V dhā*, pres **dhadh*) appear as exceptions also in Panini's system Hence the addition *adhah* — Where there is an indeur. aspirated palatal at the base, the process of 40 is continued by VIII 3 13 (and VI 3 111, 112) See also the following observation

Asiddhatva As the process (39) also holds for aspirates at the end of a stem *fada*, 40 had *asiddhatvāt* to follow on the deaspiration sūtra 39 Thus (**duhta* >) **dughta* (33) becomes > **dughdha* (without intervention of VIII 2 39), but **dharma budh tara* (V 3 57, cf I 4 17) becomes > *-dt-* (39) (> *-tt*, 4 55) (*dharmabhuttara*)

(11) (VIII 2 41) After this, the changes which the palatals and *h* had undergone in the preparatory groups could be corrected again Hence the *dh* which by VIII 2 31, and the *s* which by 36 have been substituted for *h* and palatal respectively, as far as they are followed by *s*, are reverted to gutturals again (41) (Cf p 121, group (11)) This transition is combined with that of guttural < **original* *s* (*vrūksati*, V 115)

Contents Thus for any *ḥ* and *dh* which have been constructed

Asiddhatva Neither with any of the preceding groups ((10), (11)), nor with the principal rule, which bears on the auslaut only, is group (12) constructively connected. As regards the relation between groups (10) and (12) *purā vipratishedha* might have existed, yet it does not really occur, as participles in *na* of VV in med asp do not exist. Groups 5—(7) at least could not but precede, as appears from participles like *magna* ($V masj$) in which the syncope of *s* (29), and *bhugna* ($V bhuj$) (*ny*)*akna* ($V añc$), in which the transition $j(c) > g(k)$ (30) is based on the *t* of a still supposed *ta*.

With a view to the nature of the process (the partial removal of the conditions on which the substitutions for palatals have been dependent (30)), group (12) logically follows on group (11) (further development of these palatals themselves (and of other consonants)).

For the rest, this group lays no particular claim to an earlier treatment.

13 (VIII 2 62) Now that all formations with palatals have, along with others, reassumed their proper forms (assimilations and geminations are reserved for *II'*) group 13 follows as an exception to the principal rules for palatals (30, 36) and *h* (31). According to sūtra 62 a palatal at the end of a *kvin* stem and also *h* of *usnh*, become $>$ guttural. The *s* of *dadhṛs* (from another progression) and some other forms in *n*, also belong here.

Contents At the end of a *pada* a guttural is substituted for the final consonant of the stems which have been built up by the help of *kvin* (according to III 2 58—60).

Obs 21 — In Pāṇini's system these forms end in *j*, *c*, *h*, *ṣ* or *s*. Except in cases where *n* preceded (VIII 2 23) 62 is an exception to some of the rules under group (7) as far as the position *ante* is concerned (**dikbhyaḥ*, $V diṣ$, with further change of *k* to *g*, not by VIII 2 39 but by 4 53).

In the cases where an indeur palatal is at the base, *k* ($< \tilde{k}s$) of the nom masc and fem and loc pl has been generalized (p 121).

Obs 22 — Nominatives such as *yun* arise as follows in Pāṇini's system. The analyzed form is $V yuj + kvin + su$ (III 2 59 IV 1 2). As a strong casus, this nom **yujis* gets *num* by VII 1 71 ($\triangleright yunjis$). The infix becomes the final consonant by VIII 2 23, and for this auslaut *n*

before *s* hitherto (by preceding rules or in the *Dhatu* or *Gana-pāṭha*) *k* is now substituted.

Obs 18 — *Dh* + *s* = indeur *ḡh* + *s* here (avest *ḡ*), *ḡh* which had been introduced as *h*, had been replaced by *dh* (by 31) Indeure *gh* or *g'h* + *s* (avest *γ* + *ḡ*) via VIII 2 32, 3 59 and 4 55 becomes > *ks* in Pāṇini's system

Other *ks* according to VIII 3 59, some examples of *ks* already in the *DhP* and *GP*, reduction of *ks* according to VIII 2 29 (p 120, group (6))

Asiddhatva As far as it refers to the auslaut, the process is *pūrva-vipratishedhena* set aside by the principal rule Thus loc pl *dvīs* + *su* becomes > **dvidsu* (39), not **dvīksu* (41) The process of the preceding sūtra having nothing in common with the present one, the mutual order of the two sūtras was quite arbitrary, it is the same as that of the sūtras in regard to which they possess secondary *asiddhatva* (31 seqq, and 31 and 36 respectively)

(12) (VIII 2 42—61) By means of artificial conditions Pāṇini was enabled to formulate the preparatory changes of the palatals as generally as possible (29, 30, group (7)) and yet, with regard to the position *ante*, to adapt them to the *jaṣṭa* sūtra Having served their turn, the said methodical means could be dispensed with now Hence, after roots ending in the palatals (*laṣṭ bhuy*, etc) *t* of participial *ta*, again along with other speech sounds, becomes > *n*

Obs 19 — Group (10) (save for such forms as *dharmabhūtara*) actually, group (11) by implicit restriction, and group (12) naturally refers to inlaut-processes only. So far these groups belong together.

Contents This group contains the rules for the restoration of participia perfecti passivi and participle like formations

1. Positive rules

a (42—50, 60) *T* (of **ta*) > *n*,

b (51—55) Construction of *ka*, *ta*, *ma* and similar participle-like formations (54 optional),

2 Optional rule (56) *T* (of *-ta*) remains or becomes > *n*,

3 Negative rules (57—59, 61) Restrictions on the rules of group 1 (61 Vedic)

Obs 20 — As regards the result of the substitution (*na*) 60 belongs to 1, on account of its being a restriction, it has been put in group 3

Asiddhatva Neither with any of the preceding groups ((10), (11)), nor with the principal rule, which bears on the auslaut only, is group (12) constructively connected. As regards the relation between groups (10) and (12), *pūṛva vipratishedha* might have existed, yet it does not really occur, as participles in *na* of *V* *V* in med asp do not exist. Groups 5—(7) at least could not but precede, as appears from participles like *magna* (*V masj*) in which the syncope of *s* (29), and *bhugna* (*V bhuḡ*) (*ny*)*akna* (*V añc*), in which the transition (*g*(*c*) > *g*(*k*) (30) is based on the *t* of a still supposed *ta*.

With a view to the nature of the process (the partial removal of the conditions on which the substitutions for palatals have been dependent (30)) group (12) logically follows on group (11) (further development of these palatals themselves (and of other consonants)).

For the rest, this group lays no particular claim to an earlier treatment.

13 (VIII 2 62) Now that all formations with palatals have, along with others, reassumed their proper forms (assimilations and geminations are reserved for *II'*) group 13 follows as an exception to the principal rules for palatals (30 36) and *h* (31). According to sūtra 62 a palatal at the end of a *kvin* stem, and also *h* of *usnīh*, become > guttural. The *s* of *dadhīrs* (from another progression) and some other forms in *n*, also belong here.

Contents At the end of a *pada* a guttural is substituted for the final consonant of the stems which have been built up by the help of *kvin* (according to III 2 58—60).

Obs 21 — In Pāṇini's system these forms end in *j*, *c*, *h*, *ṣ* or *s*. Except in cases where *n* preceded (VIII 2 23) 62 is an exception to some of the rules under group (7), as far as the position *ante* is concerned (**dīkbbhyah*, *V diḥ*, with further change of *k* to *g*, not by VIII 2 39 but by 4 53).

In the cases where an indeur palatal is at the base, *k* (< *k̐s*) of the nom masc and fem, and loc pl has been generalized (p 121).

Obs 22 — Nominatives such as *yun* arise as follows in Pāṇini's system. The analyzed form is *V yuj + kvin + su* (III 2 59 IV 1 2). As a strong casus, this nom **yujis* gets *num* by VII 1 71 (> *yunyvs*). The infix becomes the final consonant by VIII 2 23, and for this auslaut *n*

is substituted by 62. In compounds nom. s. *-yuj* (with *kvip*, III 2 61) becomes *-yug* (VIII 2 30) > *-yuk*, 4 56)

Asiddhatva In regard to the principal rule (39), sūtra 62 is *asiddha*, and its place, therefore, was after this rule (before a vowel or voiced consonant *V diç* (with *kvim* according to III 2 59) could not become > *did* (besides *dit*), unless it should pass through VIII 2 39 (*diç* > *dis* > *did* > *dig*, see p. 82).

*63. *K* or *t* is substituted for the *ç* of *V naç* (with *kvip*) in the same position *Anuvṛtti*!

*64, *65 The last transitions of *yam* consonants that still remained to be accounted for (cf. p. 115) constitute the second *prāsaṅgika*-group to group 13. The place of this group is naturally determined by the circumstance that both groups nearly entirely treat of consonants at the end of a root, and would seem the more desirable as, thus, the connexion of the preceding groups needs not to be disturbed. Sūtra 65 (inlaut) conveniently associates itself with 64.

Contents and mnemotechnics *M* at the end of a root which is likewise a *pada*, becomes > *n*. According to 65 medial *m* at the end of a root before a suffix beginning with *m* or *v*, likewise becomes > *n* *Anuvṛtti* of *mo no dhātōk*!

Obs. 23 — Although, as a matter of fact, the process of 64 is a proleptical assimilation of *m* to the following (dropped) dental consonant, with analogical generalization, Pāṇini could, after all, not formulate it as such, as his dentals had been dropped before by VI 1 68 or VIII 2 23 (e.g. 2nd, 3rd s aor. *agan*)

Asiddhatva. The process is *asiddha* in regard to VIII 2 7. Thus **pratām* (with *ā* before *kvip* according to VI 4 15) — whether adj. or indecl (*svarādī*) — becomes > *pratān*, but this does not become > **pratā* (which would have been the case, if 64 had not been *asiddha*, as after the syncope according to VI 1 67 (*pra*)*tān* is (a root as well as) a stem) (Henceforth such remote relations, exercising no influence on the order of the sūtras or groups, will not be pointed out any more)

14 (VIII 2 66—75). The group which accounts for the only important exception to the principal rule (39), concludes the *hal*-groups. Not *ç*, but *R(ru)* is substituted for any *s* at the end of a *pada*.

Obs 24 — It deserves notice that this substitution, too, is calculated upon the position before vowel or voiced consonant (cf p 122 Obs 15)

Group 14 comprehends, moreover, the last exceptions to VIII 2 30 31 and 36 VIII 2 67 (*avayaR* etc) and 72 (*anaduḥ*) In regard to 14 itself — as to 9 — VIII 2 23 (group 5) proves an exception with reference to formations like *creyan* (< **creyans* (p 76)) (not **creyand*, **creyanR* *pūrvapratisedha*) A few imperative and optional substitutions are appended

Contents and mnemotechnics By the principal rule *ru* is substituted for any *s* at the end of a *pada* and for the *s* of *sajus*¹⁾ To these *rus* are further added those < *j*, *h* *ṣ* in the nominatives of 67, and the *ru* in *ahaR* as a stem *pada* (68)

Either *ru* or *r* according to 70, 71

No *ru*, but *r*, *d* respectively for the *n* of *ahan* and the *s* of *vas* etc according to 69 and 72 73 respectively (according to 72 also for the final of *anaduḥ*²⁾)

Ru or *d* < *s* and *d* at the end of roots by 74 75 respectively

The composition of this group has been amply discussed on p 24 seq

Obs 25 — This *R* (< *s* (*n*) without preceding nasal), if preceded and followed by *a* which is *apluta* becomes > *u* according to VI 1 113 seq, the *R* (< *n*) from VIII 3 1 belongs likewise here (p 133 Obs 29)

Asiddhaiva The place also of this group (exception¹⁾, is rather arbitrary It is due to the relation to the first group of the following *ac* division (*q v*)

3 — *Ac* division 2 (VIII 2 76—107)

Gr (15) Lengthening of *s* and *u* (VIII 2 76—79)

Gr (16) Vowel and consonant-change in *adas* (VIII 2 80, 81)

Gr (17) *Pluta* lengthening and accentuation of vowels (VIII 2 82—107)

The *ac* sutras one group of which (group (1)) has already come up for discussion, are continued and concluded now by groups (15)—(17)

((15)—(17)) (VIII 2 76—108) It is only natural and quite in agreement with the logical principle that the vowel sūtras should be separated from the consonant sutras In accordance with the

¹⁾ On *sajus* see Wackernagel *Altindische Grammatik* I p 42, § 38 and III p 248, § 136b)β ²⁾ On *anaduḥ* see *ibid* I, § 156a) § 285b)β, III, § 139a)βββ

same principle, however, one would expect the former to have been placed together at the beginning, so as (apart from a few vowel sūtras) to be followed further on by the whole bulk of consonant-sūtras. The latter would, indeed, be fairly connected with the former by means of the transition-sūtra VIII 2 108 (vowel > consonant)

The chosen order is apparently due to the *asiddhatva* principle, according to which (15) required to be preceded by 14 (*aṣṭh*) (66, 76) (and also, for instance, by group (3) (*jegilṣate* with short *i*) (20, 76))

(15) (VIII 2 76—79) — First with the *ru* of 14, original *r* (and also *v*) is combined on account of the same behaviour (lengthening) of preceding vowels *āṣṭi* > *aṣṭiR* > *aṣṭiṚ* as *gīr* > *gīr*

Contents This group treats of formations in which there is so called combined sound change between *īr* (*ūr*) and *īr* (*ur*), and analogical forms. Pāṇini's rules come to run as follows. In roots in *r* and *v*, *i* and *u* *upadhā* are lengthened, provided *r* (*v*) stands at the end of a *pada* or before a consonant, in the latter case not in roots which are followed by a *bhā*-suffix, nor in the *VV* *kur* and *chur* either. Likewise (78) *u* before *r* + consonant at the end of a root (*hurch* and the like)

Asiddhatva The *asiddhatva* of this group in regard to the preceding one has been indicated above

(16), (17) Group (15), which, as pointed out above, itself methodically associates itself with the last *ka*! group, is followed by two similar groups: the vowel- (and consonant) change in the pronomen *adas* (group (16)) and the protraction (along with a particular accentuation) of the last vowel in a sentence, and of some other vowels (group (17))

(16) (VIII 2 80, 81) **Contents and mnemotechnics** Group (16) gives, in a highly artificial way, the declension of *adas*. See § 11 p. 84

17 (VIII 2 82—107) The sūtras of the last vowel group (17) treat of the protraction (*pluta*-lengthening) of vowels in the last syllable of a sentence, and of a few others. In most cases (83—99) the *pluta* vowel becomes *udatta*, sometimes it is *anudatta* (100—102) or *svarita* (103—105). Protraction of the diphthongs *ai* and *au* consists in the protraction of their last element (*i*, *u*) (106). Of final diphthongs which are not *pragrhya*, the first element is protracted in certain cases (83, 90, 97, 100) while (82') the following *i* (*u*) gets *udatta*

So far as group (16) also bears on consonants, it forms, together with the preceding group, the substitutions of which are conditioned by certain consonants a kind of concatenation between the *hal* and the *ac* division (Group (17) bears on vowels only!)

Asiddhatva Inversion of (15) and (16) (which would be possible constructively) would only disturb the natural order since (15) had to join (14) (see above) Both (15) and (16), however, could not but precede (17) because they add new examples to the *natura* long vowels of VIII 2 86 (secondary *asiddhatva*) Group (17) had therefore also *asiddhatvat* to conclude the series

* . *

Recapitulation Formation-group I

In summarizing the results of the above inquiry, we arrive at the conclusion that as regards the First Formation group which, at first sight, looks like a conglomerate of most divergent sūtras, a certain systematical composition cannot be denied

I Consonants

The plan will best be seen if the auslaut alone be considered (with which an and inlaut are combined when occasion arises)
See p 61

a Yam-consonants

- 2 First those cases are treated separately in which a final consonant that, from the beginning has stood at the end, shows another development than the one through which it passes, if it reaches the said position at a later stage
- (3 4) Inlaut With this group two kinds of inlaut processes conveniently associate themselves (groups (3) and (4))
(The remaining *yam* consonant group is, as a *prasangika*-group placed after group 13 Of a few separate nasals the development is accounted for by 62 68 69) (groups 13, 14))

b Jhal consonants

- 5 Hereafter all those *jhal* consonants which from the outset have stood at the end as well as (5) those which come to stand there in consequence of the simplification of final consonant groups, fall together

- (16) In the following vowel group ((16)) consonants and vowels
 (17) are changed in the last vowel group (17) vowels only
 mainly such as stand at the end of a sentence but also
 a few others

Of all these vowels (17) the accent is taught by the
 same sūtras

- Of those which are directly afforded by I—VIII 1 it
 (1) has been accounted for in group (1) (which associates
 itself with VIII 1)

Summary

In consequence of the above operations the state of things as
 compared with the one from which Pāṇini has started (p 54
 seq) is the following

I Vocalism The construction of the whole vocalism is finished

Obs 26 — 1 Certain *svarita* vowels are however
 still *anudatta* 2 No final vowel has become nasalized
 as yet 3 A *samvṛta* is still *vṛta* Comp also VIII 3 2
 seqq 33

II Consonantism For the greater part the consonants are
 either still in their analysis form or they have assumed a trans-
 itory form (mostly the one occurring before vowels)

Obs 27 — It deserves notice that the changes of
 speech sounds here as well as further on are presented
 as being dependent on particular immediately following
 speech sounds which shows that the "processes in question
 are conceived as a kind of regressive assimilation (in its
 widest meaning)

B FORMATION GROUP II SAMDHI (VIII 2 108 — 4 68)

From the previous forms IIa the *avasana* and IIs the *sam-
 hita* forms are derived

IIa *Avasana* forms

The speech sounds which in consequence of the substitutions
 in I—VIII 1 and in Formation group I have come to stand at
 the end mostly show the form they assume in pausa However
 1 all *jhal* consonants are still *mediae*

2 *ru* of I (group 14) is still everywhere *R* (preceded by an oral
 vowel)

3 original *r* is still everywhere *r*

- 4 short, long and protracted *a*, *i* and *u* (*apragrhya*) are nowhere nasalized
 5 *a samvṛta* is still everywhere *a vivṛta*

The tracing of the definitive pause forms is provided for by the following sūtras

- 1 Tenuis may be substituted for any media according to VIII 4 56 (*dhruḡ dhruḍ* (2 33, 37, 39) (optionally) > *dhruk*, *-dhruṭ*¹⁾ (*dvīs* >) *dvīḍ* (39) (optionally) > *dvit*)
 2 and 3 *Ru* and *r* become > *h* according to VIII 3 15 seq (*devah*, *antah* (*śaradī*, I 1 37), *manahsu*)
 4 VIII 4 57 admits of optional corresponding nasal
 5 *A* becomes > *ṛ* according to VIII 4 68

All these sūtras have been inserted in IIs in places where they fit in best whether in falling together with *samhita* sūtras (VIII 3 15, 4 68), or by way of *prasanga* (VIII 4 56, 57, see under IIs)

Asiddhatva The mutual arrangement of the sūtras mentioned above was as far as VIII 2 1 is concerned next to arbitrary, as the processes are not connected constructively. The last sūtra (*Aa*) had certainly to be preceded by VIII 4 57 (see IIsC on group 5 p 150)

IIs *Samhita* forms

Three groups of sūtras must be distinguished (cf, p 59) Position-group *A* (VIII 2 108—3 54) in being governed by VIII 1 16 on the whole concerns the auslaut and thus joins I, Position group *B* (VIII 3 55—4 39) chiefly refers to the inlaut (cf VIII 3 55) whereas Position group *C* treats of both the internal and the external *saṃdhi*. By way of preparation the forms undergo such changes in *A* and *B* as render a simple formulating of the rules under *C* possible

Obs 28 — A few *saṃdhi* rules occur already in I—VIII 1 (cf g VI 1 73 seqq 3 114 seqq)

Position-group *A* (Auslaut) (VIII 2 108—3 54)

- Gr 1 *I* (*u*) of according to VIII 2 107 protracted *e*, *ai* (*o*, *au*) becomes *y* (*i*) (VIII 2 108) (P 61 wrongly *e*(*o*))
 Gr 2 Nasal at the end of a *padī* becomes *ru* (VIII 3 1—12)

*Synecopation of *dh* before *dh* (VIII 3 13)

¹⁾ Cf Renou Grammaire I § 45b

Gr. 3 Changes of *ru* and *r* (VIII 3 14—22).

Gr. 4. Changes of or after final nasals (VIII 3 23—32)

*Initial *r* after *d* becomes *dhs* (VIII 3 29).

**Nipāta uñ* after *may*-consonant before vowel becomes *v* (VIII 3 33)

Gr. 5 Development of *h* (VIII 3 34—54)

1 (VIII 2 108) Position-group *IIA* is opened by a sūtra which continues the last group of the preceding Formation-group (I (17)) by extending the process of VI 1 77 to the formations that have not been constructed until in the said group

Contents Thus the *i(u)* which, from an element of a diphthong, has developed into an independent vowel according to the preceding sūtra, becomes > semi-vowel.

Note According to Çākalya this *y(v)* is dropped afterwards (VIII 3 19)

Asiddhatva This process is apparently secondarily *asiddha* in regard to the processes of the preceding group.

2 (VIII 3 1—12) Group 2 is the first of a series of groups (2—5), each of which is the continuation of the preceding one or of one of the preceding ones. As to the resulting form (*ru*), group 2 belongs to the last consonant-group of the preceding Formation group (I 14), from which, as a whole, it separates itself only in that it bears on *saṃdhi*

Obs 29 — Two kinds of *ru* must be distinguished here. The one constructed by VIII 3 1 in the vocatives of the Vedic adjectives in *matup* and *kvasu* is, owing to its historical origin (<*s* preceded by an oral vowel), not preceded by an *anunāsika* or an *anusvara*, whereas the *ru* which is substituted for *m* or *n* (by 5—6 and 7—12 respectively) is a historical sibilant, which followed the nasal, or developed analogically after it

In all sūtras (1—12) the *ru*, whether etymological or analogical, is formally derived by Pāṇini from *m* or *n*. It is clear, however, that, with regard to the processes VI 1 113 seq, the *ru* of VIII 3 1, owing to its origin (see Obs 29) goes with the *rus* of the preceding Formation group (VIII 2 66 seqq), whereas (cf *tu* in VIII 3 2) the *ru* of VIII 3 5—12 is either preceded by an *anunāsika* (VIII 3 3) or by either an *anusvara* or an

Obs 32. — In the vocatives of the adjectives in *mat* and *rat* *n(num)* has been infixed according to VII 1 70, it is this *n* that becomes $>ru$ by VIII 3 1

Asiddhatva As the processes have nothing in common, group 2 is constructively not connected with group 1 Both groups had, however, to precede group 3 (see below) Group 3 being the logical continuation of group 2, the chosen order is the most natural one

Obs 33 — By the *siddhatva* of the last group of Formation group I in regard to the present one, substitutions according to VIII 3 3 and 9 likewise after *pluta* vowels which do not stand at the end of a verse, are excluded¹

Obs 34 — It deserves notice that in *at* (VIII 3 9) *h* is likewise comprehended (which is overlooked by Böhtlingk) Thus *paññāṇaṭṭhaṭṭha* (RV 1, 184, 2) like *dasyūñṇaṭṭha* (RV 1, 63, 4, cf Macdonell, Ved Gr, p 62)

3 (VIII 3 14—22) Partly in combination with *r*, *ru* is variously changed now As the last substitution of *ru* has taken place in group 2, group 3 is rightly placed immediately after this group

Contents (1. *Ru* $>$ *u*, VI 1 113 seq (exception to 4¹), see § 11 C)

2. *Ru* (cf 9) (and likewise *r*) $>$ zero (VIII 3 14)

3 *Ru* (and, except before *su*, also *r*) $>$ *h* (VIII 3 15, 16)

4 *Ru* $>$ *y* or (like other *y*, and *v*) zero (VIII 3 17—22)

Asiddhatva Besides in regard to the preceding group, group 3 is secondarily *asiddha* in regard to group 1, as the *y* also of this group is changed in VIII 3 17 (*dgnāṣṭi* TS 6, 5, 8, 4) The most natural order of these three groups is, therefore, the existing one

4 (VIII 3 23—32) To the *anusvaras* which have likewise been constructed in group 2 (VIII 3 4) those which arise from final *m* before consonants, are added now (23—27)

With these processes a few sutras according to which by continued articulation a paragogical occlusive develops after a final nasal, conveniently associate themselves (28—32)

Obs 35 — With a view to further substitutions the secondary consonant is sometimes presented as an augment to the following speech sound So also in the case of gemination of final *n* *n* and *n* after a short vowel In this way, for instance, the stem *n* of *kurvan(n)aste* (32) is prevented from being cerebralized according to VIII 4 2 (cf VIII 4 37)

Obs 32. — In the vocatives of the adjectives in *mat* and *vat n(num)* has been infixed according to VII 1 70, it is this *n* that becomes $>ru$ by VIII 3 1.

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Asiddhatva Besides in regard to the preceding group, group 3 is secondarily *asiddha* in regard to group 1, as the *y* also of this group is changed in VIII 3 17 (*āgnāy* TS 6, 5, 8, 4) The most natural order of these three groups is, therefore, the existing one

4 (VIII 3 23—32) To the *anusvāras* which have likewise been constructed in group 2 (VIII 3 4) those which arise from final *m* before consonants, are added now (23—27)

With these processes a few *sūtras* according to which by continued articulation a paragogical occlusive develops after a final nasal, conveniently associate themselves (28—32)

Obs 35. — With a view to further substitutions the secondary consonant is sometimes presented as an augment to the following speech-sound So also in the case of gemination of final *n*, *n* and *n* after a short vowel In this way, for instance, the stem *n* of *kurvan(n)āste* (32) is prevented from being cerebralized according to VIII 4 2 (cf VIII 4 37)

If *dh* (29) were not *tut*, **ddh s* would become > **ddh s* (by VIII 4 41) > **tt s* (55) (cf VIII 4 42)

The substitute of group 2 (5—12) is a *ru* preceded by a nasal sound As regards the *ru*, this group belongs to the large *ru* group (VIII 2 66—3 12, with the exception of the *ac* groups), with regard to the nasal it joins the nasal group 4 With a view to the latter circumstance 4 should have followed immediately on 2 In this case, however, the treatment of the *ru*, which is continued in group 3, would have been interrupted Practically only one of the two advantages could be gained

Contents and mnemotechnics According to the main rule, final *m* before consonant becomes > *m* *Anuvṛtti* of *hali* in 23 from 22 Exception *samrat* (by the side of Ved *samrajstum*¹⁾) Restrictions according to 26, 27

In inlaut position *m* < *m* or *n* before *ghal* consonant

Asiddhatva The processes of the two preceding groups (substitutions of, and for *ru*) belong together Group 4 had to follow on 2—3 *eg* on account of the *asiddhatva* of VIII 3 30 in regard to 7 (*bhavan* (*tsaye*), VIII 3 30, 4 55, without substitution according to VIII 3 7 (cf 2, 4))

5 (VIII 3 34—54) Hereafter the substitution of *h* for *ru*, which has taken place in too large a measure in group 3 is confined to the position before voiceless consonant + sibilant (VIII 3 35) and, optionally, to a few other positions In most other cases *s* is substituted, *ś* restored

Obs 36 — All these rules — and so likewise VIII 3 101 seqq (in *B*), part of which have wrongly been put under VIII 3 55 (57) — prepare for the general *samdh*-rules VIII 4 40 seqq, the new dentals figure as *sthannah*, the cerebrals as conditions (Part of the substitutes (of group 5) will become conditions even in the next group)

The processes of this group continue substitutions of group 3 (*ru* > *h*, VIII 3 15 16) By conversion of 5 and 4, the distance between 4 and 2 (see under group 4) would, however, have become greater still The *anuvṛtti* of *hali* (22 23), moreover, would have been impossible

Contents and mnemotechnics

1 Principal rule VIII 3 34) *h* [*khari*, cf 15] > *s*

2. Negative rule (35) *h* [*khari*] *śarpate* remains

¹⁾ A 3f on VIII 3 25

3 Optional rules a) (36) *h* *carā* > *s* or remains, b) (37) *h* *kuproh* > *h* (*h*) or remains

Sūtras 38—54 (with alternating *anuvṛtti* of *sah* and *sah*) are restrictions on 3b) (*kuproh* (37), therefore, remains valid) Sūtras 38—48 hold for classical Sanskrit According to these sūtras *h* is in the given position regularly replaced by *s* (according to 1), but by *s* in cases (39, 41, 43—45) in which *s* after *r* and *u* would not or would not universally become > *s* by 59 seqq The *h* may remain in the positions described in 42—44 This is, on the whole, also the case in Vedic (49—54) Before particular words (50), and sometimes also in case endings (51, 53, being itself restricted by 52 (54)) *s* is imperative

Obs 37 — Before *k(p)*, *s* (after *r* and *u* *s*) appears at the end

a) of stem-*padas* (see the suffixes of III 1 9, V 3 47, 67, 70) according to VIII 3 38, 39 (cf I 4 17)

b) of word *padas* in the following cases

1 according to 40—43 (indeclinables) (42, 43 also *h*),

2 according to 44—48 (44 optionally, 45—48 (compounds) exclusively)

(3) In Vedic formations *s* is substituted according to 49—54 (49, 54 optionally, 52 predominantly, 50, 51, 53 exclusively)

Anuvṛtti of *visarjanīyasya* from 34 in 35—37(—54), of *visarjanīyah* from 35 in 36, 37 (and, “by frog leap”, in 42—44, 49, 52, 54)

Asiddhatva Being a continuation of group 3 group 5 had to follow on it On the relation to 4, see above

*(VIII 3 13, 29 33) *Prasangika sūtras*

VIII 3 13 (syncope of medial *dh* before *dh*) precedes the analogous sūtra 14 (*anuvṛtti* of *lopaḥ*) Likewise VIII 3 29 (prothesis of *dh* before *s* after final *d*) precedes sūtra 30 (with *anuvṛtti* of *st dhuf*) Finally VIII 3 33 (*u* optionally > *v*) which, being the third transition *u* > *v*, could have followed immediately on VIII 2 108, is placed after 32, considering (the *anuvṛtti* of *aci* (32) as well as) the necessity of *may* in 33, from which *pratyakara* the *nam* nasals had to be excluded (after these nasals *u* ceases to exist and becomes > *nu*, *nu*, *nu* according to 32)

Note According to 33 *Kim u uktam* or *kim v uktam* (*u* is *pragrhya*, I 1 14), not *kim v uktam* (33 *asiddha* in regard to 23 on which it had, therefore, to follow)

*Position-group B (Inlaut) (VIII 3 55—4 39)*Gr 1 Cerebralization of *s* (VIII 3 55—119)*Idem of *dh* (VIII 3 78, 79)Gr 2 Idem of *n* (VIII 4 1—39)

The changes under *A* (partly definitive) were mainly substitutions for speech sounds, chiefly *s* and *n*, at the end of a *pada*. Before the formulation of the general laws of *C* is embraced, first medial *s* and *n*, and likewise *dh* are adapted to this by VIII 3 55—4 39. The position at the end is excluded by VIII 3 55 and 4 37.

1 (VIII 3 55—119) (Although most sūtras of this group refer to initial *s*, this group, with a view to the chief sūtra (VIII 3 59, cf 111), has been put under the head „Inlaut“ here.) Now that the syncope of medial *s* has been treated in VIII 2 25 seqq (cf also VI 4 35 and the like), and the change of final *s* — as far as it has not been dropped by III 4 98 seq, VI 1 68 etc — to *ś* has been effected in the preceding Position group (*A* 5) all such changes of medial (final and initial) *s* to *ś* as are not comprised under the general cerebralization law (*C* 1a), are accounted for in group *B* 1.

Contents and mnemotechnics. It should be noted first that, whereas the *s* of *sah* (*sad*, *sat*) becomes *ś* after any speech sound (by 56) in all other cases cerebralization takes place only when the requirements of 55, 57, 58 (63, 64) are met. These cases are carefully subdivided.

1 (59—62) Cerebralization of *s* at the beginning of a root, of suffixal *s* and of final *s* of some roots according to 59 and 60 respectively, with restrictions (on 59) for the position behind reduplication syllables with *s* and *n* (61, 62).

Obs 38 — Apart from a few exceptions ¹⁾ of the roots referred to in VI 1 64 those with initial *s* followed by a vowel or a dental are, together with a few others, quoted with *ś* in the *DhP*. According to 64 *s* is restored, for which, to some extent (VIII 3 59, first part, read with 111) *ś* is substituted — On the reason for applying this method, which practically comes to this that only those roots with initial *s* shall conform to VIII 3 59 (first part) which under particular conditions become *ś* in *samdhī* see Liebhich ²⁾

¹⁾ *MBh*, VI 1 64 on *Vārtt* 1, Vol III p 43, l 9 seq.

²⁾ Liebhich *Zur Einführung* III, § 15.

- 2 (63—100, partly further restrictions) Cerebralization of *s* in *abhyāsa*s (64) at the beginning in finite verbs after *upasarga* and in corresponding nominal derivatives and in *samāsa*s (nominal compounds) With egression group 78, 79 (cerebralization of *dh*)
- 3 (101, 102) Cerebralization of final *s* (in spite of VIII 3 55)
- 4 (103—109) Vedic rules Sūtras 103 and 104 (auslaut') link 4 with 3 (concatenation)
- 5 (110 — end of the *pada*) Negative rules (119 optional and only Vedic)

Prasanga

*(VIII 3 78, 79) The change of *dh* > *dh*, which is quite similar to that of *s* > *s*, has been inserted (78, 79)

Obs 39 — In formations in which *s* is not taught by any of Pāṇini's sūtras it is directly introduced as *ṣ* (thus for instance, *DhP* I 643 *V bhāṣ* (cf lit *balsas*))

Obs 40 — In conceiving suffixal *s* as *s* at the beginning of a suffix only, Bohtlingk contradicts himself by explaining forms like *sarpīṣi* by VIII 3 58 (59) The example however, is obviously right (only it should be noted that *num* in 58 also means = *anusāra*, because *n* has become > *m* before by VIII 3 24) Under *pratyaya* (59) indeed, any *s* that forms part of a suffix is comprised Thus in this way only the cerebralization of *s* in such forms as *haviṣa* (suffix *iṣi*, *UnS* II 108) *jayuse* (suffix *usi*, *UnS* II 117) and the like, i.e. of the *s* in the stem suffix of the *iṣ-* and *us-* stems in the cases in which *s* does not stand at the end, may be accounted for In spite of the circumstance that *iṣ* and *us* are *Unnādi* suffixes the cerebralization of this *s* can only be explained by 59

Asiddhatva in regard to sūtras of the preceding group is very frequent Thus VIII 3 59 (3 101) is primarily (secondarily) *asiddha* in regard to 16 (*su'*) (34 (**sarpīṣṭara* > *sarpīṣṭara* > *sarpīṣṭara*, § 41, 42 has for '))

The inserted group (78, 79) required to be placed after 59 (*cjosiḍhram* > *cjosiḍhram*)

2 (VIII 4 1—39) Now that the apocope of final *n* has been treated in 12 the transition to *nu* in the same position in 12 *Az* and that of medial *n* to *anusāra* etc (cf VIII 4 58) has been dealt with by VIII 3 24, all such changes of medial resp initial *n*, and once (20) also final *n* as are not comprehended in the

general cerebralization-law (*Cia*) are accounted for in group *B*₂, sūtras VIII 4 1—39

Contents and mnemotechnics Subdivision.

- 1 (1(4)—14). The *r(s)* which causes the cerebralization, occurs in the nomen (simplex or compositum) which contains the *n*
- 2 (14—25) Cerebralization of *n* in *verba finita* after on *upasarga* and in corresponding nominal derivations, likewise in the prefix *ni*
- 3 (26—28) Vedic rules
- 4 (29—35) After *upasarga* in *krt* suffixes and in some roots (With *upasargād* (from 28) as a coconcatenation)
- 5 (35—39) Negative rules (combined with the preceding group by *na* (taken from 34, being a restriction on 29)

Obs 41 — In formations in which *n* is not taught by any of Pāṇini's sūtras, it is from the first introduced as *n* (thus, for instance, *GP* 16, 3 *gana* (< *grna*, cf *āyelpa*))
Cf Obs 39

Obs 42 — Nearly all roots with *n* at the beginning, no matter by which speech sound this *n* is followed (cf Obs 38¹), are quoted with *n* in the *DhP*. According to VI 1 65 *n* is restored, for which to some extent (VIII 4 1—29) *n* is substituted — The commentary of Patañjali on VI 1 65 is a repetition of that on *s* (last part) under 64. The few exceptions to the rule are mentioned there (*nrt*, *nand*, *nard*, *nakk*, *nāt*, *nāth*, *nādh*, *nṛ*)¹

Asiddhatva The *s* which is one of the conditions for the substitutions, is partly due to substitutions of the preceding group, which is, therefore, followed by the present one on account of secondary *asiddhatva* (of 2) Examples *pari sunoti* (VIII 3 65, 4 2), *mskena* (*ni* + *√ sad* + *kan* (regarded as *dit*, *UnS* III 45), VIII 3 66, 4 2, *a* and *d* of the root are elided, VI 4 143)

Position group *C* (General *Samdhi*) (VIII 4 40—68)

- Gr 1a Assimilation (of *sthāna*) (VIII 4 40—44)
- Gr 1b. Idem (media becomes > homogeneous nasal) (VIII 4 45)
- Gr 2 Gemination (VIII 4 46—52)
- Gr 1c. Assimilation (of *bāhya-prayatna*) (VIII 4 53—55)

¹) Cf Liebhich, loc. cit., § 14

- *Devoicing of final consonants in pausa (VIII 4 56)
- *Nasalization of final vowels in pausa (VIII 4 57)
- Gr 1d Assimilation (of *sthana* and *abhyantara prayatna*) (VIII 4 58—62)
- Gr 1e Idem (of *abhyantara prayatna*) (VIII 4 63)
- Gr 3 Syncopation of consonants before homogeneous consonants (VIII 4 64 65)
- Gr 4 Svaritating of *anudatta* vowels after *udatta* (VIII 4 66, 67)
- Gr 5 *A virita* becomes *>a samvrita* (VIII 4 68)

Unless it appear otherwise from the context, for instance from VIII 4 41, (42) 45, 55 (56) 58 (59) the following rules, mainly bearing on assimilation, gemination and syncope, apply to any position of the words in their present condition

As in the first Formation group, 1 a *hal* and 2 an *ac* division must be distinguished

1 *Hal* division (VIII 4 40—65, Groups 1—3)

1a (VIII 4 40—44) Assimilation of *sthana* In paradigms in which palatals alternate with cerebrals or velars, these last consonants have been restored (mainly in I (7)) wherever the palatal had been generalized by Panini (in the analysis) On the other hand, new palatals have been added according to sūtras such as VII 4 62, and the like Those palatals, however, which had been normalized to dentals by Panini (in the analysis) had hitherto preserved their methodical form Restoration also of these palatals, in all positions at a time, takes place according to 40 *Stoh ś cuna ś cul* (restricted by 44)

In the same way, the preparatory operations being performed in B, the cerebrals that were still lacking could now be accounted for

The assimilations are progressive as well as regressive *rajnah, vrksaś (śete), prsta, agnisīd (dhaukate, V dhauk, I, 98 cf VIII 4 53)*

Obs 43 — Direct *assimilatio reciproqua* does not occur in the *Astadhyayī* In all cases of juxtapositional assimilation one of speech sounds is changed first, and afterwards the other is assimilated to it (*prch + ta > prsta* (VI 4 19) *> prsta* (VIII 2 36) *> prsta* (4 41)) Dissimilation is sometimes met with *e g* in VII 4 49 (*ss > ts*)

Obs. 44 — In forms like *sarpissu*, *yajussu* the second *s* is not first cerebralized (according to VIII 3 58 (59)) and, subsequently, the first by the second (according to 4 41) (43 refers to the *tu varga* only'), but both *s*'s become $> s$ according to 3 59 (cf Obs. 40).

Contents and mnemotechnics. Two processes, palatalization and cerebralization, which logically belong together, the *sthāninaḥ* of both of them being the same (dental'), are closely interwoven here Sūtra 44 (which, as regards the subject-matter, should follow 40) being put after 43, not only *na* (42) became valid in 43 and 44 (the three negative rules, cf p. 22), but likewise the two chief rules (40 and 41) could come together.

Obs 45 — Thus the one process-group (principal rule 41 $S-tu > s-tu$, with 42 and 43 as restrictions) is inserted in the other (principal rule 40 $S-tu > ṣ-cu$, with 44 as a restriction), in the same way as the (whole) group I (3) in the whole group I 2, and as I (6) in I 5 (pp. 115 and 116 respectively)

Asiddhatva. One of the speech-sounds which cause cerebralization of dentals, is the *n* which has been constructed in the preceding group. Besides from methodical motives (*C* after the preparatory group *B*) *C* 1 had, therefore, to be placed after *B* 2 on account of its secondary *asiddhatva* as well

Obs 46 — As *ṣ g.* also the $s < k$ (from position-group *A*) belongs to the dentals that are changed, and also the *s* from position-group *B* to those which cause change, these two position-groups had to precede. The latter relation is of importance in that this relation, too, explains the order *B* 2 · *C* 1. For since *B* 2 had to follow *B* 1 in group *B* (see above) and, as appears from *ṣiṣṭa* (VIII 3 60) and the like, *B* 1 had to precede *C* 1, *B* 2 had to be placed between *B* 1 and *C* 1, i.e. it had to be followed by *C* 1.

1b (VIII 4 45) Assimilation: oral consonant $>$ homorganic nasal. While by VIII 4 42 medial *d* before participial *na* becomes *n*, those cases are described now in which a final media changes into the corresponding nasal by regressive assimilation. In the present state of development this will be the case wherever a media has come to stand at the end of a *pada* (by VIII 2 39) before a word that begins with a nasal (*Ḥvalin nayati*, $h > dh$ (VIII 2 31) $> d$ (39) $> n$ (before *n*)) — For the *asiddhatva* see p 95.

2 (VIII 4 46—52) The only consonants which are still absent, are the long ones to which under certain circumstances short consonants are lengthened.

Obs. 47 — As a long sibilant does not occur between *r* and a vowel, and both VIII 4 46 and 65 are optional, 49 had to be inserted as an imperative restriction on 46 (*catursu*, not also **caturssu*)

Obs. 48 — As, judging from the spelling in the MSS, we must assume that, in contrast with the treatment of etymologically double consonants (which before and after consonant had been shortened to and written as single consonants, even in an early period) a long consonant was pronounced in the prescot case¹⁾, it deserves notice that Pāṇini makes the present lengthening optional. See further group 3

Contents Any consonant after post-vocalic *r* or *h*, or between a vowel and a consonant may be lengthened (46, 47) There is no lengthening

- 1 of *h*,
- 2 of ante-vocalic sibilant after *r*,
- 3 of the *t* in *putra* in *putrādīn*, when used as an abusive term (*Putrādīnī* (*tvam asi, pape*)),
- 4 after a long vowel. Further
5. (according to Çakatāyana) in groups of more than two consonants

Note According to Çakalya there is no lengthening at all

Asiddhatva In *śvalid* *nayati* *d/n* (< *dh/n* (VIII 2 39) < *h/n* (VIII 2 31)) > *n/n* (VIII 4 45), and this may become > *nnn* (47) If group 2 preceded 1b, *dn* would (optionally) become > *ddn*, which might yet become > *dnn* by 45, but this could not change to *nnn* any more, because *d* would have ceased to stand at the end (observe *padante* in 45, from 42), cf *vedmi*)

1 c (VIII 4 53—55). The whole consonantism has been framed now, so that there remain only some distinctions of *prayatna*, and, in certain cases (group 1d), also of *sthana*, and some optional phenomena of syncope to be accounted for in the following groups

Group 1 c concerns the assimilation (and dissimilation) of *bahya-prayatna* (cf p. 62) According to the well known rules,

¹⁾ Cf Wackernagel, *Altindische Grammatik*, I, § 93

any (*jhal-*) consonant before a *trītiya* or *caturtha* of any *varga* becomes > media, hence aspirates are deaspirated, voiceless consonants become voiced, in reduplication-syllables only the aspiration is lost, before tenuis, tenuis aspirata and sibilant also the stem. (Apart from a few exceptions (VIII 3 28, 31) any final *jhal*-consonant had become a media (according to VIII 2 39))

Contents and mnemotechnics The composition of this group, including the connexion with the following *prāsaṅgika-sūtra*, represents a technical masterpiece. The *sūtras* (read with I 1 50) run as follows

- 53 *Jhalam jaṣ jhaṣi*. Muta and sibilant before voiced explosive > media (See Obs 49)
 54 *Abhyāse car ca* Media aspirata and tenuis aspirata reduplicate as media and tenuis respectively, the other explosives and the spirants as such
 55 *Khari ca* Muta before voiceless consonant > tenuis, spirant remains

Obs 49 — Although *h* is practically excluded in 53 (cf VIII 3 31 seqq) yet *sūtra* 53 has not *jharām* (instead of *jhalam*) on account of 54

We observe

in 54 *anuvṛtti* of *jhalam* and *anukarsa* (see Obs below) of *jaṣ*,
 in 55 likewise *anuvṛtti* of *jhalām* (from 53/54), and also of *car* (from 54)

Hereupon follows as a *prāsaṅgika sūtra*

- 56 *Vavasāne* (In pausa both media and tenuis are allowed at the end of a *pada*) with *anuvṛtti* of *jhalam* (53/55), and *car* (54/55) and with *anukarsa* of *jaṣ* from 53/54 (in skipping 55)

Obs 50 — In virtue of (*car*)*ca* in 54, *jaṣ* becomes valid from 53. Such an *anuvṛtti* which is effected by means of a relative word (here *ca*) is conceived as *anukarsa*. In this way *jaṣ* is likewise read into 56 by (*car*)*vā* (> *jaṣ car vā*) Comp VIII 3 37 with *anukarsa* (by *ca* = *vā*, see p 89) of *visarjanīyah* (from 35) (but with *anuvṛtti* of *visarjanīyasya* (from 34—36))

*(VIII 4 56, 57) *Sūtra* 56, which in consequence of the chosen order has been separated from 53, which it would have conveniently joined, is placed before the *prāsaṅgika sūtra* 57 now so as to render the *anuvṛtti* of *vavasāne* in this *sūtra* possible

By sūtra 57 other *anunāsikas* are added to those of II A (The reverse is seen in the two following sūtras with reference to the *anusvaras*, which had likewise been constructed in II A (group 4))

Asiddhatva As far as the final result is concerned, group 1c might follow as well as precede group 2. In the first — given — case *kṛsna + rdh + it* > *kṛsnardhdhṛ* (VIII 2 40) (optionally) > *dhdhdh* (4 46) > *-dddh-* (53) (optionally > *-ddh-*, 65) is constructed, in the other *-dhdh* > *-ddh* > *dddh* > *ddh*¹⁾. Yet there are cases in which, by conversion of 1c and 2, the application of *paribh* CXVII²⁾ according to which — despite of VIII 2 1 — a *Tripāḍī* sūtra is not *asiddha* in regard to (preceding) gemination-sūtras, would theoretically lead to wrong consequences. If the aspirate not standing at the end of a *pada* (45¹⁾) is followed by a nasal, as in *badhnāmi*, *dhn* optionally becomes > *dhdhn* (47) by the given order, and this will become > *ddhn* (53) whereas the inverted order would admit of gemination first (> *dhdhn*), but would exclude the deaspiration of the first *dh* (in consequence of the then existing *asiddhatva* of the gemination in regard to the said simplification). Consequently group 1c had to follow group 2.

1d (VIII 4 58—62) Assimilation of *sthana* and *abhyantara-prayatna*. The processes of this group bear on changes of speech sounds to others which are homogeneous (*satarna*) with the following or preceding sound, *i. e.* (cf I 1 9 10) which agree with them as regards the manner as well as the place of articulation in the cavity of the mouth.

Contents and mnemotechnics. According to the first two sūtras, part of the *anusvāras* which have been constructed in too large a measure by VIII 3 5—12, 23, 24, are replaced by other consonants. The two principal sūtras VIII 4 58 and 59, account for the partial assimilation of *m* to a following *jay-* (as far as VIII 3 24 is concerned *jhay-*)consonant, which in the inflaut, takes place imperatively, and, in the auslaut, optionally (*hanti*, but *sandhi* along with *samdhṛ*¹⁾).

Obs 51. — The *anusvara* in forms like **kṛsnāmi*, **karsāmi* (VIII 3 24) has served to avoid cerebralization according to VIII 4 2 (*pūrvavipratishedha*¹⁾).

¹⁾ Cf *Phl* on *paribh* CXVII ²⁾ *Ibid* *Pūrvavipratishedha* 45111
BRISKOOL Pūrvavipratishedha

Obs 52 — As appears from I 1 8, an *anunāsika* is a nasalized speech-sound, whether vowel or consonant. The meaning of *anusvāra* might be inferred from the sūtras in question.¹⁾

The substitutes by which the *anusvāra* is replaced by VIII 4 58 seqq., are very dissimilar. All of them, however, are consonants, and we may, therefore, assume that the *anusvāra* itself is also a consonant (A preceding short vowel is, indeed, made long by position¹⁾)

N or *m* (cf VIII 3 4—12, 23, 24) preceded by an oral vowel (cf VIII 3 4) underlies this consonant

The *anusvāra* finally results

- 1 (medially as well as finally, VIII 4 58, 59) before consonants which do not belong to the *pratyāhāra* *yay*,
i e before *ś, s, ṣ, h, ḥ, ḷ* and *ḥ*,
- 2 ((optionally) finally only, VIII 4 59) before a *yay*-consonant, *i e* before semi-vowels, nasals and mutes

All these positions have in common that an oral vowel precedes, while a consonant, as a rule a spirant, follows. We may, therefore, assume that after this vowel, and when an open consonant follows, the closure which is required for the articulation of the *n* (*m*), is obtained in a dissatisfactory way (comp the numerous phonema of this kind in the language of the uneducated)

The place of the narrowing, thus caused, varies according to the place of articulation of the following consonant. The fact, however, that a "spirantical to vowel-like *n* (*m*)" is produced in all these cases, is sufficient to conceive all these kindred nasals as one sound, and to designate them as such (just as, for instance, the *k*-sounds before palatal and velar vowels respectively) (Only final *n* before *l* acquires a colour of its own (= nasalized *l*, see below)) Medially before an occlusive — *yay*, which is employed in 58 with a view to 59 must "by implied restriction" be understood as *jay*, because medial *n* and *m* before semi-vowels and nasals remain unchanged (VIII 3 24) — this more or less "careless" articulation is little likely to occur. While conforming to it by partial assimilation of place, the closure required for the *n* (*m*) is, on the contrary, secured by the one for the following occlusive. This is apparently always the case in Pāṇini's dialect, and thus

¹⁾ Comp also Śrīyākanta Śastry, *Rikāntram*, VI, Notes, p 4 seq and p 13 seq

nasals are the result which are homogeneous with the following consonant.

In external *samāh* the consonants are less closely connected. This also holds good for the position before a nasal and, *a fertiori*, for the position before semi-vowels: the *arurāra* is optional here.

The above supposition as to the articulation of the *arurāra* is, on the whole, confirmed by what is said about it in the *prātisāhkyas* (which, for the rest, admit the *arurāra* to a less extent than Pāṇini does).

It remains to be noted that also before this "spirantical nasal", the last part of the preceding vowel will be attended with nasalization. This nasalization, however, is left out of account before any nasal by Pāṇini. Only when the whole vowel is nasalized, he speaks of *arurāra* (see above). This is never followed by a nasal consonant, the nasalization has been brought about at the cost of it.

N before *l*, in which position it had remained intact, also in Vedic (VIII 3 9 has *ar'*) up to now, is, likewise by partial assimilation, changed to nasalized *l* (*ml* or *ml̥*) by VIII 4 60, further, dental mute before *l* becomes > *l* (*lhaṁl̥* (or *-wl̥*) *lunāts*, *tal-laya*).

Sūtras 61—63 formulate changes at the beginning of a *paṭa*

As a counter-part to VIII 2 23, VIII 4 61 (combined with 63) gives the simplification of consonant-groups at the beginning, *st* of *sth* and *st* (after *ud* (*ut'*)) in *sthā* and *stambh* respectively.

Obs. 53. — Thus Pāṇini describes this aphæresis as a change of *s* to a speech-sound that is homogeneous with the preceding one, *s* *e* (cf VIII 4 55) to *t*, with subsequent syncope of this *t* according to 63

According to VIII 4 62 initial *h* optionally becomes > media aspirata that corresponds with the preceding media

Para-sarāna is valid in 58—60, *anurill* of *prāsa* (*sarānah*) in 62 (taken from 61)

Asiddhatva. This group cannot be connected constructively with the preceding *prāsangika*-group (pause-forms'). Nor needs it necessarily to be placed after *te*, which hears on *āhja-prayātna*-distinctions only. Like the latter group, the present group *id*, had, however, to follow on group 2. Otherwise *tantram* might yet become > *tanntram* (58, 47)

12 (VIII 4 63) Assimilation of *āhja-antara-prayātra* The process

of this sūtra represents the only case of optional progressive (metaleptical) assimilation of manner of articulation in the cavity of the mouth

Contents and mnemotechnics Initial *ç* followed by a vowel, *y*, *v* or *r* after any tenuis may become > *ch*

Jhayaḥ which, in virtue of 55 (*ç*-1) can only mean *çayaḥ* here, as well as *anyatarasyām*, are valid from 62

Asiddhatva The place of the sūtra is sufficiently explained by the said *anuvṛtti* Constructively there exists no connexion with the preceding group

3 (VIII 4 64, 65) Syncope of consonants The substitutions of this group first of all concern such formations as, for instance, *Āditya* (with *nya*, IV 1 85), in which, in consequence of the syncope according to VI 4 148, two identical consonants have come to follow one another With them those forms are combined which contain consonants that have been lengthened in group 2

Contents and mnemotechnics The etymologically double consonants, which were probably pronounced as single ones (see Obs 48), may be simplified, if they are preceded by a consonant Under the same conditions lengthened consonants (group 2) may be shortened again Postconsonantal mutes and sibilants may, further, be elided, if a homogeneous consonant follows (65) (Not so the *yam*-consonants! Cf the *yathā samkhyā* sūtra I 3 10)

Obs 54 — The shortening had to be described as optional, as the lengthening (group 2) was likewise optional

Obs 55 — Simplification of double consonants after vowels is not very frequent (*ç g* VII 4 50 *asī*) The (post-vocalic) "etymological" *cch* < *tch* (VI 1 73) remains likewise

The two sūtras are mutually, as well as with the preceding group connected by *anyatarasyām*, mutually also by *lopah*

Asiddhatva Group 3 must also on account of its secondary *asiddhatva* follow on the *savarna*-group (1d), as the required homogeneity is partly based on the substitutions of this group (Thus *çiddhi* (cf VI 4 101) had to pass through 58 before it could conform to 65, *utthātum* through 61, all those formations in which *k* follows on a consonant-group, through 62 (type *amārd*, cf VIII 2 24, 39), etc)

2 *Ac*-division (VIII 4 66—68, Groups 4, 5)

4 (VIII 4 66, 67) The last change of *bahya prayatna* concerns the accent of *anudatta* syllables which are preceded by an *udatta*

Contents Such syllables take a *svarita*, provided no *udatta* or *svarita* follows

Asiddhatva The accent not being dealt with in Formation-group II, the sūtras of group 4 cannot be *asiddha* in regard to any process of this group. On account of their general scope, if 68 is really an interpolation, sūtras 67 and 68 rightly stand at the end, i.e. in the same place that is occupied by the previous accent group in Formation-group I. The accents of the latter group being postulated with reference to the substitutions of the present group, group II's C 4 is secondarily *asiddha* in regard to I (17)

5 (VIII 4 68) According to the last *ac* sūtra (*Aa*), being at the same time the last process of the whole development, a *svarita*, which throughout the book has been regarded as being homogeneous with *a*, is replaced by a *samvṛta*

Obs 56 — If it be rightly assumed (*MBh*, *Vartt* 3, cf *Vaj Prat* I 72) that both times the short vowel is meant, the peculiar form of the sūtra remains after all somewhat suspicious. Not only would Pāṇini have departed from his usual way of expressing himself according to which one would have expected *Atah* instead of the first *A* (I 1 70, cf IV 1 95 and the like), and *at*, at best *ah*, instead of the second *a* (cf VII 2 102 and the like) and, therefore, *Ato 't* (cf VII 1 86) (or possibly *Ato 'h*) for the whole sūtra, it would, moreover, be the only case in which Pāṇini would have employed a mark (that for the second *a*) for a sound value different from the one which in the same sūtra would be indicated by the same mark, and which is not accounted for anywhere (the *CS* knows a *svarita* only)

Moreover, the *mangala* word *udaya* (67) should this really be meant as such would not stand at the end of the work *Aṛiṣṭa*¹⁾, which does not stand in the middle either, can hardly be alleged as an argument. In view of the twofold concession made by Pāṇini with respect of the putting of *ṛddhi* at the very beginning (cf p 17) one would expect *udaya* at the very end

¹⁾ Liebh, *Handkordanz*, p 4

Although both the *Vaj Prat.* (I 72) and the *Ath Pr* (I 35) quote this sūtra, under these circumstances, and on the grounds pointed out by Sköld¹⁾, it would seem more plausible to assume it to be an interpolation. It remains only to be added, which indeed, Sköld does, that in order to make the work conclude with a word of a faustal character, it must at the same time be assumed that the proper-names of 67, too, are due to interpolation. All the arguments which Liebich adduces against Sköld are taken from the *MBh*. This is, however, exactly what Sköld disputes¹.

Asiddhatva Whether interpolated or not, the sūtra stands in the right place. Not only is it *asiddha* in regard to all sūtras in which short *a* (*vivṛta*) plays a part (e.g. VIII 4 57, but also 63 (*atī*!) and the like), on which it, consequently, had to follow, it could, theoretically speaking, not even change places with the immediately preceding sūtra. If it had preceded the last accent sūtras (66, 67), the *udātta* (*svārita*, *anudatta*) of these sūtras would not have comprised also the *ṛ* (*ṛ, ṛ*), as *udatta* etc. are awarded to the vowels of *ac*, to which *ṛ* (*samvṛta*), being not homogeneous with any of the vowels of the *CS*, does not belong.

From the fact that the two accent sūtras precede, the *a* (*vivṛta*) of I 2 29 seqq. is still referred to in them as to whether *anudatta* or *svārita* accent is required or not. By 68 another vowel is put under the accent that had regularly been ascribed to *a* (*vivṛta*) according to 66, 67.

This is the last restoration. The progressions are concluded

* . *

Recapitulation Position group II

IIa *Avasāna*-forms

The pause forms are constructed by means of operations which are constantly joined to those which bear on *samdhū*, either by being attached to them or by being comprehended in rules which hold good for both positions (see p. 132, IIa).

¹⁾ Sköld, Papers, p. 8

Its *Samkṣīṭā* forms

According to the position of the speech sounds which undergo changes, three groups of substitutions (*A, B, C*) could be distinguished, which on the whole bear on the auslaut, the inlaut and on any position in the *pada* respectively. In the preparatory groups *A* and *B* the final and medial consonants undergo such changes as to adapt them to conform to the general *saṃdhi* rules of group *C* (VIII 4 40—end of the *pada*)

Obs 57 — Among the *sūtras* of *A* the important inlaut process VIII 3 24 occurs owing to its belonging together with 23. The substitutions according to VIII 3 29 30, 32 (33) fit in well with this group (*A*, external *saṃdhi*) and, moreover, associate themselves with 28 and 31 (continued articulation)

To *B* such auslaut- and anlautprocesses are added (VIII 3 101 seqq., 105 seqq. and passim) as do not conform to the general *saṃdhi* rule VIII 4 41 (Position-group *C*). As they concern changes of *s* which are entirely equal to the preceding ones (*s* > *s*) and partly also dependent on the same conditions they are best suited to *B*.

Certain *sūtras* of *C* refer to a particular position (VIII 4 45, 54 61 seqq. and the like)

It is by means of the operations of this Position group *Its C* applied to 'dialect I' (VIII 2 1)—VIII 4 39 that finally, the definitive consonantism and vocalism are brought about in the same order as the one in which, apart from I₁ they have been treated in the preparatory Formation-group I.

II. HIGHER GROUPS

§ 15

Under I (§ 14) it has been shown that the existing arrangement of the thematical sub-groups in the main-groups is a logical and at the same time (in view of VIII 2 1) a possible one.

It has been observed there that the spreading of these sub-groups over two large Formation groups, and the division of the second Formation group into three Position-groups meets rational methodical requirements. Likewise that both Formation groups open and conclude with vowel-*sūtras* whereby the contiguous middle *ac* groups (VIII 2 76—108) form a coconcatenation, in which further, the first and the last *sūtras* bearing on the lengthening of certain

vowels before consonants, and the change of vowel to consonant respectively, naturally associate themselves with the first (second) *hal*-group

Obs. 58. — In the second *hal*-group sūtras VIII 3 33 and 4 57 (vowel-sūtras) appeared to be egressions

It is clear that in this broader connexion, too, should it lay claim to the name of system, the *asiddhatva* principle has to be kept in view by the side of the logical (and mnemotechnical) one

Now, it is clear that head-group II as a *samhitā*-group, the substitutions of which concern the abstract formations of I, must follow this group (secondary *asiddhatva*)

Example — Thus **kaR āste* (VIII 2 66, head group I, > *ka āste* (VIII 3 17, 19, head group II) (> *kq āste*) (VIII 4 68).

Obs 59 — If the order were reversed, nearly all processes would lead to wrong results. In *bhavānt gte*, for instance (I—VIII 1), *-nt'c* would become > *-ñc/c-* (VIII 4 40) (or *-ñc/ch-*, 4 63) > *ñ/c* (or *ñ/ch*) (VIII 2 23) (> *k/c(ch)* (30)) and sūtra VIII 3 31 would not come into account at all. Svaritating of *anudātta*-vowels after *udātta* constructed according to VIII 2 5 seqq., 82 seqq. would be excluded. And so on.

The same holds good for the arrangement of the three Position-groups in Formation-group II.

Not only, indeed, as preparatory groups, but also on account of the fact that part of the processes of group *C* is *asiddha* in regard to part of the processes of groups *A* and *B*, these groups (*A* and *B*) had to precede group *C*

Examples — *A* must precede *C* e.g. on account of the relation between VIII 3 16 and VIII 3 59 (case-ending loc pl supposed to be *su* in the former sūtra), *B* must precede *C* e.g. on account of the relation between VIII 4 2 and 58 (*n* in formations like *kurvanti* regarded as being *m*). And so on. Hence, on account of its possessing secondary *asiddhatva* group *C* had to follow on each of the preceding groups *A* and *B*

One would hardly *a priori* expect groups *A* and *B*, treat as they do of the aus- and inlaut respectively, to be connected constructively. The reverse is the case, which requires *A* to be followed by *B*.

Examples — The connexions alluded to occur 1°. in cases where substitutions in *B* depend on a speech-sound

While, thus, on the one hand, such forms as are contested by Katyayana, or whom else the authorship of the *Vārttikas* must be ascribed to, may belong to older periods, or may even be confined to some particular classes or regions, on the other hand, Patañjali not seldom vindicates Panini, although he himself settles his own *astis*

Pānini, the stupid boy whom Ćiva had been gracious to, was, no doubt, the great grammarian, who occupies the first place in the *muntiraya* by which classic Sanskrit was submitted to laws His work, in which "die wissenschaftliche Behandlung einer Einzelsprache vorliegt in einer Vollendung, die das Staunen aller derer erregt, welche genauer damit hekannt sind, die selbst jetzt nicht allein unubertroffen, sondern noch unerreicht dasteht" ¹⁾, "stands — and will always stand as long as Sanskrit continues to be studied — as a monument at once of encyclopedic research and technical perfection" ²⁾

"He has had", says Whitney ³⁾, "commentators in abundance, and has undergone at their hands some measure of amendment and completion, but he has not been overthrown or superseded"

The question, however, whether, or how far, Panini has succeeded in describing the dialect he intended to fix by his formulas, does not concern the *system*

Logical and mnemotechnical principle.

If the foregoing research should admit of a conclusion being drawn in respect of Panini's *system*, it must be admitted that, as regards the application of the logical principle, the master has sometimes failed It cannot be alleged in excuse here that "quandoque bonus dormitat Homerus" For, particularly in that part of the *Astadhyāyī* which precedes the *Tripāḍī*, notwithstanding the fact that the liberty of grouping and arranging was greatest in this very part, there are portions which, if seen from this standpoint, would seem suggestive of mere bungle Likewise the manner in which Panini passes from one process group to another, does not seldom make an artificial, nay sometimes child-like impression

Classifying his *sūtras* logically is evidently not always what Panini is primarily aiming at, however subtle the separate dis

¹⁾ Benfey, cf Kaegi, *RV*, p 10

²⁾ Belvalkar, *Systems*, p 12

³⁾ Whitney, *Grammar*, p xi

functions in themselves are. A characteristic Indian feature is missing here.

It cannot even be the alleged brevity of expression which seemed of prime importance to Pāṇini. Why then should he have often chosen the longer word, where the shorter would have done as well (*asajatarayāṁ* instead of *as* etc., *Parāṇi* CXXV etc.):

Comparatively slightly as the logical principle has been departed from in the very *Triṣṭi*, here too, however, a decided predilection for acutely expressing, i.e. by means of not too few, but even less by too many words precisely formulating the aphorisms in their mutual relation, along with a continual ellipsis by contraction (*anacrysis*), lends to the style that wondrous conciseness and terseness by which the *Asiddhānta* distinguishes itself from all that can be compared with it.

Mnemotechnics in which the veneration for word-memory, primitive tendency of Hindu civilization, finds its highest expression.

Even if it may not always be in favour of clearness, and even if it may be true that Pāṇini, by so doing, fairly often makes high demands upon the sound-understanding of the reader, whether in leaving it to him to determine the cases that have been too broadly defined for the sake of mnemotechnics (e.g. VII § 101 seq.: *yañ*; VIII § 45: *jar*, 56. *jhal* (see p. 96, Obs. 54), 62 (with a view to 63): *jhayah* etc.) or otherwise in appealing to common sense.

Though, again, it should be borne in mind that Pāṇini was conscious of addressing himself to country-men, masters themselves, who knew the forms Pāṇini laid down in his aphorisms (cf. the observation of Speyer's.¹⁾ That a severely mathematical system could not arise in this way, is evident, if it be acknowledged that Liebich is right when he speaks of the "Wortalgebra" of the *Sūtra-pāṭha*. Close attention is here the foremost requirement.

Asiddhānta-principle.

The four times one hundred sūtras of the *Triṣṭi* have been examined here in their relation to the four times one thousand of

¹⁾ Speyer, *Analekta* LXIV, § 6 Pāṇinis Absicht war es nicht, Ausländer eine fremde Sprache zu lehren, vielmehr für die Sprachgemeinschaft, welcher er selbst angehörte, die Gesetze der Sprachrichtigkeit in einem System niederzulegen.

the whole. The most important of them have been tested by applying them to the examples usually quoted. The manner of interpreting has been accounted for in §§ 6—9. Whether or not all the forms that have not come up for discussion should conform to the theory that has been explained there, and, whether the number of those sutras which were called *asiddha*, but proved not to be so, must be regarded as being considerably greater, may be decided by a more exhaustive research. But for a few cases the required possession of primary or — mostly — secondary *asiddhatva* of the sutras of the *Triṣṭupī* has been established, their putting under VIII 2 1 accounted for. The universal validity of the *Pūrvatrāsiddham* could, indeed, no more be excepted than in the case of other *adhikaras* (p. 50). In numerous cases, moreover, the abolition of neutralization was evident (§ 11 C).

The *Triṣṭupī* proved, however, to be not only, or especially, a number of single sutras which have one peculiar quality (the *asiddhatva*) in common, but, rather, a system of thematical groups which are rationally classified and arranged. A hierarchy of groups which results from an ingenious set of developmental progressions which are interwoven in such a way as to admit of a maximum mnemotechnical effect, and whereby yet the *Pūrvatrāsiddham* is maintained so carefully as to render nearly every group *asiddha* with reference to the immediately preceding one of the same rank.

Combination of the *asiddhatva* with the logical and mnemotechnical principle.

In this sense and under the said reserve at the end of this first research about the system of the most remarkable part of the *Astadhyāyī* as far as this is concerned, the opinion on the most famous *vyākaraṇa* antiquity prides itself on cannot but run *Sarvatratva siddham iti!*